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What Should Be the Level of U.S. Commitments for National Defense?

National Debate Topic for High Schools
1982-1983

Pursuant to Public Law 88-246

Compiled by the Congressional Research Service
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PUBLIC LAW 88-246, 88TH CONGRESS, S. 2311
DECEMBER 30, 1963

AN ACT To provide for the preparation and printing of compilation of materials relating to annual national high school and college debate topics

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Librarian of Congress is authorized and directed to prepare compilations of pertinent excerpts, bibliographical references, and other appropriate materials relating to (1) the subject selected annually by the National University Extension Association as the national high school debate topics and (2) the subject selected annually by the American Speech Association as the national college debate topic. In preparing such compilations the Librarian shall include materials which in his judgment are representative of, and give equal emphasis to, the opposing points of view on the respective topics.

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Approved December 30, 1963.

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FOREWORD

"What should be the level of U.S. commitments for national defense?" is the problem area selected by the National University Extension Service for the 1982–83 high school debates. The three debate propositions that have been designated within this area are:

Resolved, That the United States should significantly alter its nuclear weapon policy;

Resolved, That the United States should significantly reduce its commitment to NATO; and

Resolved, That the United States should significantly curtail its arms sales to other countries.

This volume contains groups of articles and other materials for each of the three debate propositions. In choosing items for the collection and for the bibliography, the Congressional Research Service (CRS) attempted to sample the spectrum of opinions reflected in current literature. No preference for any policy is indicated by the selection or positioning of articles herein, nor should one infer CRS disapproval of any policy or point of view not included.

Staff members of the Foreign Affairs and National Defense Division and Library Services Division of CRS cooperated in the compilation of these materials. Dagnija Sterste-Perkins, Kristin Vajs and Valentin Leskovsek selected the articles and prepared the bibliography and research guide. Valuable production and administrative assistance was provided by Irene Feldman, Barbara Sanders, and John White.

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Good luck to each debater in researching your topic and presenting your arguments.

Gilbert Gude,
Director, Congressional Research Service.

INTRODUCTION

This manual is designed to facilitate research preparations for the 1982–83 high school debate. Materials are grouped into three sections, corresponding to the three debate propositions, with the emphasis on the third proposition, dealing with U.S. military sales.

There is considerable overlap between the debate propositions on U.S. nuclear weapons policy and U.S. NATO policy. Therefore, persons researching either of these areas should consult the materials for both sections. The same principle applies to utilization of the bibliography.

U.S. Government documents listed in the bibliography may be found in most U.S. Government depository libraries. The Library of Congress cannot distribute copies of these or other materials to debaters.

The research guide included at the end of this volume should help debaters to obtain additional sources. Finally, there is included a list of relevant publications available for purchase from the Superintendent of Documents, Government Printing Office.

DEBATE PROPOSITION ONE

Resolved: That the United States Should Significantly Alter Its Nuclear Weapon Policy

As the originator of nuclear weapons and later as one of the two main nuclear powers, the United States has historically set for itself the twin goals of a defense policy incorporating nuclear deterrence and the pursuit of international agreements placing some sort of limits on the testing, development and deployment of nuclear weapons (the growth in size of the superpowers' nuclear arsenals is often referred to as "vertical proliferation" of nuclear weapons). In addition, U.S. policy has been to attempt to limit the spread of nuclear weapons to countries that do not already have them (such spread is referred to as "horizontal proliferation"). In an era when nuclear power generation is seen by many nations as an attractive alternative to increasingly expensive, shrinking supplies of fossil fuels, the interplay of commercial aspects of the peaceful uses of nuclear energy (nuclear trade) with the potential for military use of nuclear energy has become problematic.

The materials in this section deal with both vertical and horizontal proliferation: U.S. strategic weapons policy, the debate over strategic doctrine, efforts and plans for strategic arms control and reduction, the current nuclear freeze campaign, U.S. policy on nuclear exports, the link between peaceful and military uses of nuclear energy, and various policy recommendations that have been made on all of these topics.

The Reagan Administration's Strategic Modernization Program

PREPARED STATEMENT OF THE HON. CASPAR W. WEINBERGER

Mr. Chairman and Members of the Committee: It is my privilege to appear before you today to discuss the Reagan Administration's strategic modernization program and its vital contribution to the realization of our national security policy objectives. Our overall strategic goals are reflective and directly supportive of the historical objectives of American security and foreign policy. Our strategic nuclear forces will retain the missions they have had throughout the nuclear era, namely: the preservation of peace through deterrence of aggression and the enhancement of international stability.

Specifically, our objectives remain:

To deter nuclear attack on the United States and our Allies and friends;

To help deter a massive conventional attack on our forces and our Allies;

To prevent the coercion of the United States, our Allies and friends, and to preclude nuclear blackmail in a crisis;

If we fail to deter, to limit further destruction and to deny an adversary any hope of meaningful gain (in any way he would measure such gain) and to deny his politico-military objectives at any level of conflict;

and, of specific interest to this committee:

To provide a sound foundation for real progress toward the realization of meaningful and equitable arms control.

Accordingly, I am pleased to be here to discuss the foreign policy and arms control implications of our five-part strategic weapons modernization program. We strongly feel that, taken in the aggregate, these modernization programs for strategic offensive and defensive forces and their supporting command, control and communications improvements will establish a sound basis from which to restore the strategic balance, to regain survivability and enduring strength for our strategic forces in the coming years and thereby to strengthen the credibility of nuclear and nonnuclear deterrence through the remainder of the century.

I am sure that this Committee appreciates the magnitude, scope and historical importance of the President's strategic modernization program. At the same time, it is important to note that we have been forced to undertake this effort because the so-called "nuclear arms race", which so many here talked about over the past two decades, was not really a race at all. It was, more correctly, a one-sided competition. Since the mid-1960's the Soviets have been engaged in their own private arms race, while U.S. spending on strategic forces has in fact declined. A look at the number of new strategic systems deployed by the United States and the U.S.S.R. in this period is informative. Not surprisingly, the tremendous Soviet activity in this field—coupled with the relative inactivity of the United States—allowed the Soviets first to achieve parity in strategic nuclear forces and then to begin their drive for superiority.

The Soviet drive for superiority has made it imperative that we break with the lethargic patterns of the past. Delay has been the main feature of our strategic program for over a decade. We delayed programs time and time again in the hope of better or cheaper solutions, in hopes of Soviet restraint, and in hopes of meaningful arms control or reductions. These hopes have not been fulfilled. We decided we could not afford to delay any longer. The Soviets are watching, and while we have been waiting, they have been building.

The question of how best to modernize our strategic forces has thus been a top priority for the Administration. After months of deliberation, we arrived at what we believe is a comprehensive, integrated plan, the most comprehensive and far reaching such effort in the United States since the Eisenhower Administration. Indeed, the fact that this is a robust and integrated package is more important than any single element. It is also important to note in this regard, that with the complexities

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of our strategic systems and the vagaries of the nuclear balance, we may have to move away from attempting to design high confidence, long-term solutions to specific vulnerabilities and force deficiencies. Rather, we should begin to focus on development of a strategy and a sequence of force management options to respond adaptively to plausible Soviet threats designed to reduce significantly our total force capability.

With these policies in mind therefore, we set out to find balanced strategic force programs to improve the flexibility, survivability and endurance of the strategic forces and associated command control capabilities and achieve improved capabilities to enhance deterrence and U.S. capabilities to prevail should deterrence fail. Accordingly, the President's strategic modernization program contains five mutually reinforcing elements:

Improvements in communications and control systems;

Modernization of strategic bombers;

Deployment of new submarines and submarine-launched missiles;

A step-by-step plan to improve the strength and accuracy of new land-based missiles, and to reduce their vulnerability; and

Improvements in strategic defense.

It is our firm belief that this comprehensive program will end the decline of U.S. strategic capabilities and result in a deterrence situation which is far more stable and secure than exists today. We firmly believe that the key to realistic deterrence and meaningful arms control is the restoration of the strategic balance eroded by the aggressive and relentless Soviet buildup. The President's program will restore the strategic balance by ensuring that our Triad of strategic forces is robust and capable, with each leg being as strong and survivable as possible to mutually reinforce the unique characteristics of each.

The strategic modernization program will meet both the mid-term and the long-term requirements to maintain the balance. In the mid-term, the "window of vulnerability," which has been variously defined recently, simply describes a condition, and a corresponding period in time, which will worsen if we do not initiate actions now to improve our strategic capabilities. Because of the momentum of the Soviet programs and our own inactivity—which I described earlier—the momentum is in the Soviet favor because of the length of time it takes to develop and deploy strategic systems. That is why it is so important to restore the strategic balance now, and to acquire all the additional capability that we can as quickly as possible.

Correspondingly, parts of this program are designed to gain us additional strength for the time period of the mid-1980's—a period in which it is judged that the "window of vulnerability" will be at its widest—and why we seek first to redress the most serious weaknesses in our current position by modernization of existing forces. At the same time, we will be investing prudently in those new forces and R&D programs required to see us safely into the next century and beyond.

I would now like to highlight for you some of the more significant policy implications for each of our strategic modernization efforts.

COMMAND, CONTROL AND COMMUNICATIONS SYSTEMS

The first, and perhaps the most important of our five-part modernization program, is command, control and communications improvements. No matter how powerful we might make our strategic forces, their deterrent strength would be a hollow bluff if we could not control them or communicate with them in a crisis. We believe that command, control and communications systems must be as survivable and enduring as the forces they support. Such systems must provide for warning and attack assessment, as well as survivable command centers and communications links. Therefore, we plan significant improvements in our existing systems. Specifically, we will improve the survivability, performance, and coverage of radars and satellites used to warn us of a Soviet missile attack and to assess its nature, size and scope.

Mobile ground terminals for processing data from our warning satellites will be deployed; the satellites themselves will be upgraded to improve survivability.

Warning satellites and ground-based radars will be improved to give better estimates of the size and objectives of a Soviet missile attack.

Additional PAVE PAWS surveillance radars will be deployed to improve coverage of potential Soviet submarine operating areas to the southeast and southwest of the United States.

We plan to upgrade the survivability and capability of command centers that would direct our strategic forces during a nuclear war.

E-4B airborne command posts will be deployed to serve the National Command Authority—that is, the President or his successor—in time of war.

EC-135 airborne command posts serving military commanders—including those serving NATO commands—will be hardened against nuclear effects and will be equipped with upgraded satellite and very low frequency and low frequency communications.

We will deploy survivable communications that link command centers with all three legs of the U.S. strategic Triad.

Very low fequency and low frequency communications receivers will be developed and installed on strategic bombers to ensure their reception of orders.

We will upgrade communications to deployed submarines, including the deployment of an extremely low frequency communications system which will allow reception of messages by deeply submerged SSBNs.

A new satellite communications system will be developed providing extremely high frequency communication channels that will ensure two-way communications between commands and forces.

Finally, we will initiate a vigorous and comprehensive R&D program leading to a communications and control system that would endure for an extended period beyond the first nuclear attack. Improvements in command and control are particularly important since by enhancing the survivability and effectiveness of our forces they reduce the total size of the forces required. Thus we are making qualitative command and control improvements in lieu of quantitative force expansion.

BOMBER FORCES

We plan to take a number of steps to improve our bomber forces. We will develop a variant of the B-1 bomber and procure 100 aircraft, with the first B-1 squadron becoming operational in 1986.

We will continue a vigorous R&D program for an Advanced Technology Bomber (the so-called "Stealth" aircraft). This bomber, under current plans, will be deployed in the 1990's.

Newer B-52s (G and H models) will be modified to carry cruise missiles. Selected aircraft will be modernized to provide added protection against the effects of nuclear explosions (particularly electro-magnetic pulse effects) and to improve their ability to survive against Soviet air defenses (by installation of additional electronic countermeasures equipment).

Older B-52s (D model) will be retired in 1982 and 1983.

Over 3,000 cruise missiles will be deployed on B-52Gs, B-52Hs, and B-1s. The first squadron of cruise missile-equipped aircraft (B-52Gs) will be operational in 1982.

Finally, existing KC-135 aerial tankers will be outfitted with new engines to increase airborne refueling capabilities.

The previous Administration planned to rely on the aging B-52 force until the "Stealth" bomber become available in the 1990's. We have rejected that approach. We believe that the limitations of the B-52 demand replacement as soon as possible. The B-1 we will deploy, however, is not the same as that cancelled by our predecessors but rather a variant of that design. Its capabilities will be essential in the late 1980's and beyond. In particular, we need the greater B-1 payload, its smaller radar cross section and its improved survivability.

The B-1 offers significant reductions in radar cross section. As you know, the radar cross section of an object is a measure of the relative amount of radar energy reflected by the object. Radar cross section depends on the shape, orientation, and material of an object as well as its physical size, and, the smaller the better. It also varies with the frequency of the radar. Through application of radar absorbing material and redesign of the engine inlets, the radar cross section of the modified B-1 design has been reduced by more than an order of magnitude from the original design.

This reduction is not large enough to prevent detection by Soviet radars. However, it grealty facilitates new techniques in electronic countermeasures: the smaller the radar cross section, the easier it is to hide the bomber and fool the radar. The B-1's combination of lower radar cross section, improved electronic countermeasures, lower penetration altitude and higher penetration speed should enable the B-1 to penetrate Soviet air defenses in the 1980's and into the 1990's. Once the Advanced Technology Bomber is deployed, we plan for the B-1 to become the stand-off cruise missile carrying aircraft. Thus we will be able both to penetrate and stand-off with cruise missiles for the remainder of the century. In addition, the B-1s (and later the Advanced Technology Bombers) optimally employed in concert with our cruise missile carrying B-52 aircraft will impose the ultimate stresses on Soviet air defenses. The synergistic combination of mutually reinforcing penetrating bombers and stand-off cruise missiles will greatly compound the problems and thus dilute the effectiveness of Soviet air defense. Their large investments in air defense can therefore be made obsolescent by our careful mixture of capabilities and tactics offered by the penetrating bombers and cruise missiles.

But penetration will be meaningless if our bombers are destroyed before they can be launched. It is thus essential that our bombers have an adequate margin of safety to survive any Soviet attack on their operating bases. Here too, the B-1 will represent a major improvement.

The B-1 has a much better margin of safety than our B-52s in launch survivability.

It can dash much faster than the B-52 when escaping its base.

It is at least twice as hard as the B-52 to nuclear effects.

Our conclusion is that the B-1 will be an order of magnitude harder to destroy at home than the B-52.

LAND-BASED ICBMS

With respect to land-based missiles, we plan a cautious, step-by-step approach. The so-called multiple protective shelter basing scheme favored by our predecessors has been cancelled. This scheme had serious military drawbacks and would not have solved, in the long run, the basic problem: the current vulnerability of the Minuteman and Titan ICBM force. However, we cannot afford to put off deployment of the MX, a much more effective and accurate missile than the existing Minuteman. We will therefore continue development of MX and produce at least one hundred missiles. Some will be deployed in modified Titan and Minuteman silos. We plan now to restructure the silos planned for MX deployment to increase their hardness to nuclear effects and thus to buy time until we have selected and implemented the final MX basing scheme. The harder silos will, in the context of our total force, enhance deterrence during the period before a long-term basing mode for MX becomes available.

For the longer-term, we believe there are alternative basing modes for MX, and vigorous research and development efforts will be initiated on three possibilities. The options we will consider include:

Continuous Patrol Aircraft.—This concept would deploy missiles in survivable, long-endurance aircraft, capable of launching the missiles while in flight.

Ballistic Missiles Defense.—Under this concept, we would actively defend land-based MX missiles. Research and development efforts for anti-ballistic missile defenses will be increased and the program accelerated. Our efforts will not be directed toward creating an effective city defense, which we continue to believe is not technically feasible. Ultimately, any ground-based scheme may require such a defense, but we are unwilling to commit to ballistic missile defense today because of uncertainties of cost and effectiveness. Any eventual decision to deploy point defenses as an effective defense of our ICBM forces is likely to require alterations to the ABM Treaty. Since the Soviets have been spending far more than we on ballistic missile defense in recent years, any modification to the Treaty must be carefully examined to ensure it is in the net interest of ourselves and our Allies. Thus, this accelerated research is not a decision to begin production and deployment of an ABM system nor to seek abrogation or modification of the 1972 Treaty. We are convinced, however, that the survival and endurance or our land-based nuclear forces is an essential element is the deterrent equation, and that we must explore all options—including ballistic missile defense—which may contribute to that survival.

Deep Underground Basing.—Our final alternative, deep underground basing, would entail deployment of MX in survivable locations far undergound. If this plan proves feasible and cost-effective, missiles so deployed would be able to survive massive attack and would provide us a true enduring capability.

We will select from among these options as soon as sufficient technical information becomes available and, in any case, no later than 1984. Regardless of the option we select, MX deployment—together with deployment of the Trident II missile at sea—will end the Soviet monopoly on prompt hard target kill capability and thus enhance deterrence.

SEA-BASED FORCES

In the area of sea-based forces, we plan three steps.

First, we will continue the production of Trident ballistic missile submarines at a steady rate of one per year. As you know, the first such submarine, the USS *Ohio*, recently completed her initial sea trials and has proven to be even faster and quieter than originally designed.

Second, we will develop a larger, more accurate sea-launched ballistic missile, known as Trident II or the D-5, for deployment on Trident submarines beginning in

1989. Trident II will allow us to take full advantage of the large launch tubes which we have designed into the new *Ohio* class. The new missile will be larger, have a longer range, have better accuracy and carry either more warheads or larger ones than the Trident I missile. It will represent a significant improvement in capability. The much longer range will double the available patrol area for our Trident submarines, substantially complicating Soviet anti-submarine warfare programs and adding to submarine survivability even in the face of unexpected advances in Soviet anti-submarine warfare technology. The combination of increased accuracy and greater throwweight available with Trident II will allow us to attack any target in the Soviet Union, including hardened missile silos. In deploying Trident II, we will be increasing the total payload of each Trident submarine and thus avoiding any reduction in sea-based capabilities when large numbers of our existing Posiedon submarines are retired in the 1990's.

The third step in the sea-based portion of the Reagan strategic modernization program is the deployment of Tomahawk land-attack cruise missiles on our ships and general purpose submarines. This deployment will begin in mid-1984 aboard submarines.

STRATEGIC DEFENSE

The final element of our strategic modernization program involves strategic defense.

We plan to upgrade, in coordination with Canada, the North American Air Surveillance Network. The plan will include some combination of new Over-The-Horizon-Backscatter (OTH-B) radars and improved versions of the ground radars that exist today. We will replace five squadrons of aging F-106 interceptors with new F-15s. We will buy at least six additional AWACS airborne surveillance aircraft for North American air defense to augment ground-based radars in peacetime and to provide surveillance and control interceptors in wartime. These aircraft are in addition to those we have programmed for use with NATO forces in Europe.

We will continue to pursue an operational anti-satellite system and, as I discussed a few minutes ago, we will vigorously pursue research and development on ballistic missile defense. Finally, we will improve our civil defense efforts. These steps end years of neglect during which the United States has virtually ignored strategic defense. As a result of all these initiatives, by the end of this decade we will double the number of U.S. warheads which will survive a Soviet attack. Of even greater significance, we will dramatically increase the effectiveness of our forces whether viewed in the context of a surprise attack on our normal day-to-day peacetime posture or of a similar attack when we are at full alert.

PROGRAM SUMMARY AND NATO REACTION

In summary, this comprehensive program modernizes all major elements of the U.S. strategic posture, begins to redress the existing imbalances with Soviet forces and signals a national commitment to attain whatever capabilities are needed to counter further growth in Soviet power and global adventurism. It also strengthens and reinforces our extension of our strategic deterrent to our Allies. I am pleased to note in this regard, that I recently briefed the NATO Defense Ministers on the details of our program and on its underlying policy implications. My NATO colleagues endorsed the President's strategic program not only in closed session, but publicly as well. As the communique of the Nuclear Planning Group meeting on October 21 notes, NATO Defense Ministers "expressed their support for the determination of the United States to ensure the deterrent capability of its strategic forces whose importance to the overall defense of the (NATO) alliance is crucial . . .". Calling U.S. strategic forces "the ultimate guarantee of Western security," the NATO Ministers echoed our view that the U.S. modernization efforts "are intended to maintain an adequate and stable balance of forces at the lowest possible level and do not represent an attempt to achieve strategic superiority."

ARMS CONTROL IMPLICATIONS AND OPPORTUNITIES

Let me now turn to a discussion of what I, and certainly this Committee, consider to be a vital element of the President's strategic weapons decision—its implications and opportunities for arms control.

As I noted earlier, our strategic programs are fully consistent with our policy to seek meaningful and equitable limitations on strategic weapons at reduced levels. In fact, this program is a necessary prerequisite for the achievement of such limitations. Our experience over the last two decades has demonstrated convincingly that we cannot limit the growth in Soviet strategic weapons unless we ourselves are fully prepared first to meet our national security needs, with or without arms control.

The Soviets will respond seriously to proposals for meaningful and equitable reductions in strategic forces only if they have a real need to do so. Thus, they must become convinced of our commitment and resolve to take the steps necessary to meet our deterrent needs, regardless of what actions they might take. The strategic program we are pursuing should so convince them.

As I also noted earlier, in selecting our modernization program, our primary consideration was to ensure that it met our national security needs—that it would begin to correct the strategic imbalance which now exists and at the least cost. We did not plan this program so that it would avoid conflicts with the now expired SALT I or with the SALT II agreements negotiated by our predecessors. Nevertheless, it is a fact that this program will have no near-term conflicts with either of those documents. Accordingly, it is consistent with our stated policy that, while our SALT review is underway, we will take no actions which will undercut existing agreements so long as the Soviet Union does likewise. However, I would like to comment further on certain arms control implications of this strategic program.

As you know, the United States continues to be a party to the ABM Treaty. We anticipate that the proposed research and development activities in the ballistic missile defense area will be consistent with the terms of the ABM Treaty over the next few years. The possibility does exist, however, that we may in the future decide that, to ensure a survivable ICBM force, we will need an ABM system which would require amendment of the ABM Treaty. Should that be the case, we will consider seeking such amendments of the Treaty at an appropriate time, taking account of all relevant military and political factors. Any such amendments, would be fully consistent with the Treaty's objective of enhancing strategic stability. I would again note, however, that we are at this time talking about a contingency, not a certain event.

Members of this Committee will recall that the ABM Treaty of 1972 was predicated on the assumption that the companion interim agreement on offensive arms would "halt the momentum of the Soviet offensive buildup," to quote a phrase often used in its support. We believed that limitations on offensive arms would obviate the requirement for an ABM defense of our strategic land-based missiles. The Soviets knew that our willingness to halt the deployment of the SAFEGUARD ABM was linked directly to Soviet restraint in the deployment of offensive missiles that threatened our deterrent.

Unhappily, the underlying logic of the bargain struck in 1972 has been undermined by a massive buildup of Soviet offensive forces since then. The "freeze" that was then anticipated quickly gave way to a thaw—as the Soviets deployed a whole new generation of ICBMs, exploiting loopholes in the interim agreement and menacing our land-based force. And while the interim agreement long ago expired, the ABM Treaty remains in effect.

Some concern has been expressed with regard to the arms control implications of the decision to deploy nuclear-armed SLCMs on our attack submarines. I would first note that this deployment will occur well after the SALT II Protocol would have expired, had that Treaty come into force. Hence, the deployment would have been consistent with the terms of that Treaty. With regard to future arms control efforts, and the concern heard in some quarters that deployment of nuclear SLCMs will complicate verification of a future agreement, I would note the following. First, the Soviets have already deployed large numbers of cruise missiles on their submarines and surface ships. To the extent that a problem exists or will exist, it is already there, and not of U.S. making. Second, there is implicit in this concern the assumption that if we do not deploy certain weapons systems, then the Soviets won't deploy them either. There is no basis for such an assumption. On the contrary, the Soviets give every evidence of deploying the systems they regard as serving their interests, regardless of U.S. actions, and despite our forebearance.

Also, some concern has been expressed with regard to the effect that our SLCM deployments might have on NATO's agreement to modernize our land-based, long-range, theater nuclear forces. I believe that our deployment of SLCMs on attack submarines, as part of our strategic forces should have, and will have, no significant effect on the implementation of that decision. The requirements of strategic forces, and those of theater nuclear forces are quite different. Moreover, in its consideration of the TNF modernization program, NATO, in December 1979, explicitly rejected the deployment of cruise missiles on submarines for the TNF mission for reasons that remain valid today.

SUMMARY

In sum, the President's five-part program of strategic force modernization I have discussed today will establish our firm commitment to restore a balance of stable deterrence based on a strategy of prevailing forces and enduring strength. Taken in the aggregate, our strategic programs will greatly enhance our ability to deter Soviet agression by increasing the flexibility, survivability and endurance of all three legs or our strategic Triad and their supporting command and control system. Further, it strengthens our deterrent guarantees to our NATO Allies in a program which we believe is compatible with the two-track approach to modernization of our long-range theater nuclear forces in Europe. Finally, our commitment to carry forward with these sweeping and comprehensive improvements should strengthen our image in the third world and display our resolve to frustrate any further Soviet adventurism and expansionism in the world. But probably more important, the strategic modernization program will establish a strong foundation for renewed arms control initiatives and provide strong incentives for the Soviets to join with us in meaningful and genuine arms controls and reductions world-wide.

Gentlemen, that concludes my formal statement. I will now be happy to entertain your questions and discuss these points in greater detail.

Current
Policy No. 339

Secretary Haig

Arms Control and Strategic Nuclear Forces

November 4, 1981

United States Department of State
Bureau of Public Affairs
Washington, D.C.

Following is a statement by Secretary Haig before the Senate Foreign Relations Committee on November 4, 1981.

It is a pleasure to appear before you today to discuss the foreign policy and arms control implications of the President's strategic force modernization program. Media attention and commentary have tended to focus on the more technical aspects of the individual weapon systems rather than on the implications of the overall program for our foreign policy. I, therefore, welcome the opportunity to explore the relationship between strategic nuclear forces and our foreign policy and arms control objectives.

I am sure that the committee appreciates the historical significance of the President's decisions—decisions which will shape our strategic force policy and programs from now until the 21st century. These decisions followed what probably was the most extensive review ever undertaken of our strategic posture—the balance of nuclear forces between the United States and the Soviet Union and the range of possible program alternatives.

It is a tribute to [Defense Secretary] Cap Weinberger's skill and expertise that he has been able to sift through the computer analyses, opinions, judgments, hopes, and biases to develop for the National Security Council and the President a comprehensive and coherent plan for modernizing our strategic forces.

I, along with the other members of the National Security Council, actively participated throughout the review process, which included a series of meetings with the President. I am persuaded that the resulting plan for strategic force modernization is the best practical program that can be achieved and is an essential ingredient for accomplishing our foreign policy and arms control objectives. It has my full support.

Let me begin by taking a moment to review the changes in the strategic nuclear equation which have occurred over the past generation. From the end of World War II until the 1970s, U.S. defense and foreign policy were underpinned by the reality of U.S. nuclear superiority. Indeed, it probably would not be too much to say that we took nuclear superiority for granted and were not fully conscious of the ways in which it shaped our thinking and our strategy.

The strategic environment of the 1980s is quite different. It is one thing to deter the use of a few nuclear weapons by an adversary who is not nearly as strong as we. It is quite another to deter an opponent whose strategic nuclear capabilities are at least the equal of ours.

We are just beginning to come to terms with the implications of this new strategic environment. Inevitably, the process includes some false starts and mistaken ideas. For example, some will say that we are locked in a "nuclear stalemate" with the Soviet Union and that we must concentrate on conventional force improvements even at the expense of strategic force modernization.

I am afraid, however, that we do not have the luxury of easy choices. We may once have looked to our advantages in nuclear forces to offset Soviet conventional capabilities, but in the strategic environment of the 1980s we have no alternative but to pursue a comprehensive and balanced program which strengthens our conventional capabilities and, at the same time, modernizes our nuclear forces.

Role of Strategic Forces

I know that this committee appreciates the interdependence of foreign and defense policy. In today's environment, foreign policy and defense policy cannot be treated as separate issues. If, in the past, we could sometimes afford the illusion that defense policy and foreign policy were unrelated—that military power was applicable only after diplomacy had failed—we can no longer.

The Soviets understand this interrelationship and use it to their advantage. They learned their lesson from the setback they suffered in the Cuban missile crisis and have built rapidly and relentlessly to become a global military power. They now have the capability—and have increasingly demonstrated the willingness—to project power and intervene in the affairs of other nations, either directly or through surrogates.

As massive as the growth in Moscow's conventional forces has been, however, it should not obscure the expansion of their strategic nuclear forces which likewise support Soviet coercion and intimidation. One of the most profound changes in the international environment over the past 15 years has been the growth in the number and quality of Soviet strategic nuclear weapons. There is no doubt they are now our equal in strategic forces and are superior in some respects. Throughout, the Soviets have demonstrated their appreciation of the fact that, even if they are never used, military capabilities—including strategic nuclear forces—are central instruments of foreign policy.

We have not always been as clear eyed as the Soviets about these international facts of life. Particularly as our nuclear advantages have eroded, we have tended to lose sight of the foreign policy functions of strategic nuclear forces. In my view, strategic nuclear forces affect:

- The quality and credibility of *deterrence*;
- Our ability and success in *crisis management*; and
- The conduct and results of American *diplomacy*.

First. The first function of nuclear forces, of course, is to deter Soviet nuclear attacks against ourselves, our allies, and our friends and—in combination with conventional forces—to deter Soviet conventional aggression. But to be effective, our deterrent must be credible. Credibility, in turn, depends upon the capabilities of our strategic nuclear forces. It depends on having forces which are flexible enough to be able to respond to a broad spectrum of threats so that whatever the circumstances and whatever the level of conflict, the Soviets never have an incentive to launch a nuclear attack.

The President's plan strengthens our deterrent in the face of the changing Soviet threat. The clearest example of this is the decision to build and deploy the MX missile. If we are to deter the Soviet Union we must put at risk those things—including their military capabilities—which they value most. The question is not whether we want to build a system with the unique capabilities embodied in the MX, but whether we can maintain an adequate deterrent without it.

Second. The nuclear balance inevitably affects the political and psychological environment within which deep international crises must be managed. The confidence which we have in our nuclear deterrent cannot but influence how we will behave in a crisis. Our strategic nuclear capabilities also affect the perceptions of our adversaries: Doubts about our strategic nuclear deterrent can only increase the chance that our political will would be tested during crises.

Put simply, our own vulnerability to nuclear blackmail, as well as the susceptibility of our friends to political intimidation, depends upon our ability and willingness to cope credibly with any Soviet threat of escalation. A strong and flexible nuclear capability enhances stability by discouraging any Soviet temptation toward adventurism at the same time that it strengthens our hand in responding to Soviet political-military threats.

Third. Short of crisis, nuclear weapons perform an important function in the conduct of day-to-day diplomacy. Just as broad military capabilities form the backdrop against which foreign policy is conducted, the strategic nuclear balance casts a shadow which affects every geopolitical decision of significance. The image of U.S. strength and the perception of U.S. commitment permeates into every region of the world. The nuclear balance is a crucial, if unstated, factor for all those countries who seek stable security arrangements in the face of Soviet expansionism.

This is particularly the case for our allies. The strategic force modernization we are now undertaking is a key element in the continued health and unity of the Atlantic alliance. For more than 30 years the fate of the United States and its European allies has been inseparable. By correcting the perceptions—and reality—of emerging imbalances in strategic forces, we will underscore our commitment to resist Soviet expansionist goals and reaffirm the credibility of the "nuclear umbrella" which we extend over our allies.

These three functions of nuclear weapons—deterrence, crisis management, and day-to-day diplomacy—are enduring. Our fundamental goals for our strategic forces have not changed. What has changed is the level and character of the Soviet threat—the number and quality of their nuclear weapons. The President's plan is designed to counter this evolving threat by deploying forces that will strengthen deterrence and deny the Soviets any possibility of coercion.

The President's Strategic Force Modernization Program

The President's decisions on strategic force modernization support our foreign policy in several important respects.

The decision to deploy the MX missile demonstrates that we understand the importance of a land-based force in a strong and credible deterrent. MX deployment—first in hardened silos and later in a more permanent basing mode—reaffirms our commitment to maintain the diverse capabilities of the strategic triad in the face of an evolving Soviet threat.

The Trident II missile will provide qualitative improvements in the capabilities of the sea-based leg. The decision to develop the Trident II is important for the long-term viability of our submarine deterrent and for enhancing the effectiveness of our strategic triad.

The President's program also recognizes that a secure strategic reserve—that is, forces which can endure even in the event of a large or extended nuclear conflict—can be a critical element in enhancing nuclear deterrence. He, therefore, has decided to deploy sea-based cruise missiles to improve the resilience and effectiveness of our strategic reserve weapons as well as promptly to redress the growing imbalance in strategic forces.

As the NATO alliance concluded after the thorough study leading to its 1979 decision, however, sea-based systems cannot counter the Soviet theater nuclear forces (TNF) threat to NATO. Land-based LRTNF [long-range TNF] systems in Europe, therefore, are absolutely necessary to fill the gap in the continuum of deterrence resulting from Soviet TNF buildup and to strengthen the link between the defense of Europe and U.S. strategic forces. Sea-based cruise missiles, by contrast, would not directly respond to the Soviet land-based threat nor provide for widespread alliance participation in the defense of Europe.

Like sea-based cruise missiles, the B-1B bomber also reflects the near-term necessity to correct the growing imbalance in strategic forces. At the same time, the President's decision recognizes the long-term importance of bombers for conventional missions. It will meet our requirement for a modernized penetrating bomber until the Stealth aircraft becomes available and, thereafter, will continue to perform essential nuclear and conventional roles. Just as B-52s have performed useful missions for more than a generation, the B-1B will serve us into the 21st century.

The new emphasis on command and control, along with strategic defenses, are essential elements in the overall modernization plan. Both have been long neglected. Yet even small improvements in command and control can result in major improvements in the effectiveness of our strategic weapons. Strategic defenses also do much to reduce the effectiveness of Soviet forces and—from Moscow's perspective—make the outcome of a Soviet attack much less predictable.

The President's decision on ballistic missile defense warrants special comment. This decision does not commit us to withdraw from the ABM Treaty nor to modify it. It does expand research and development, allowed within the bounds of the treaty, to see if the new technology in this field can enhance the survivability of our land-based intercontinental ballistic missiles (ICBMs). Decisions with respect to the treaty itself will be taken only after long and hard study and following close consultations with the Congress and with our allies. We are nowhere close to such a decision.

The Alliance and Arms Control

Taken together, these programs strengthen the alliance and insure its vitality. By strengthening the bridge between theater and strategic forces and linking the defense of our homeland with that of our allies, they provide tangible proof that we consider European security to be indistinguishable from our own. As such, the strategic force modernization program is the perfect complement of our plans to deploy LRTNF systems in Europe, and will increase allied support for that vital program.

The allies share our view that any real prospects for arms control can come only from a position of strength. They—like we—understand that implementation of the TNF modernization program is an indispensable part of our effort to achieve a successful outcome of the TNF negotiations with the Soviets which begin later this month in Geneva.

As you know, our objective in those negotiations is a verifiable agreement that would achieve significant reductions on both sides, leading to equal ceilings at the lowest possible levels—levels which, ideally, could be zero.

Our fundamental goals for our strategic forces have not changed. What has changed is the level and character of the Soviet threat—the number and quality of their nuclear weapons. The President's plan is designed to counter this evolving threat by deploying forces that will strengthen deterrence and deny the Soviets any possibility of coercion.

In formulating the proposals we will present to the Soviets on November 30, we have engaged in a consultation process with our allies of unprecedented intensity. While these will be difficult negotiations, there should be no doubt that we will enter these talks with the united backing of our allies and with shared determination to reach an equitable outcome.

As in upcoming TNF talks, we have little hope of making any headway in strategic arms control unless we begin to take the steps needed to restore our deterrent capability. We intend to maintain the strategic arms control process but to seek agreements from a secure and confident military position.

Moscow's strategic buildup has put our crucial land-based missiles and bombers at risk. Only a strong and balanced program of strategic force modernization will provide sufficient incentive for the Soviets to negotiate meaningful agreements. The B-1, for example, will insure that the triad retains the unique and important military characteristics of the bomber—a traditional U.S. advantage—and should increase Soviet willingness to negotiate seriously. Likewise, deployment of MX will break the Soviet monopoly on large, accurate missiles and may, for the first time, give them incentive to negotiate real reductions in their ICBM force. More than any other elements of the plan, B-1 and MX—and the degree of Congress' support for them—will make or break our attempt to negotiate a reasonable arms control agreement.

If we fail to adopt the President's program, however, we will have dimmed our hopes of reaching an arms control agreement on strategic forces. It is as indispensable to the success of our efforts at strategic arms control as TNF modernization is to the success of the talks beginning in Geneva. This plan will give us the base from which to enter into strategic arms negotiations which, if successful, can help maintain a stable strategic balance and a stable peace.

Conversely, if critics succeed in pecking and nibbling at this or that detail of the program rather than treating it as a coherent whole, the credibility of our commitment to meet the Soviet challenge will be undermined, and the prospects for meaningful strategic arms limitations will be jeopardized.

We have made good progress in addressing the complex questions that must be answered before we reopen strategic arms talks with Moscow. The Reagan Administration is analyzing—as it must—a diversity of options and alternatives in formulating our negotiating approach, ranging from relatively straightforward modifications to the SALT II Treaty to completely new approaches to limit Soviet strategic power.

As you know, while this review has been underway, our policy has been not to undercut existing agreements so long as the Soviets exercise the same restraint. This environment of mutual restraint has provided a good basis for our preparations to resume talks with the Soviets to limit strategic arms.

We now hope that negotiations could begin as early as next spring. But, as I have said before, arms control negotiations cannot be conducted in a political vacuum. They must be closely related to the overall state of U.S.-Soviet relations. This is not a policy of mechanistic linkage but a simple political fact of life.

Conclusion

The President's program of strategic force modernization reaffirms the most basic tenets of long-time U.S. policies regarding nuclear weapons while correcting the programmatic shortcomings of the past. It recognizes the strategic environment as it is, not as we would wish it to be. It builds a foundation which will allow us to negotiate changes to improve that environment and increase the prospects for peace and stability.

I have been involved in strategic force modernization issues for more than 20 years. This is the first time I have seen a President presented with such a coherent and comprehensive approach to force modernization and deterrence. And it is certainly the first time I have seen a President take decisions that modernize all elements of the strategic triad and its supporting infrastructure at one time.

This is an integrated, pragmatic, achievable, and far-reaching program. It is the solid, essential basis for the achievement of our foreign policy and arms control objectives over the coming years.■

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Current
Policy No. 346

President Reagan

U.S. Program for Peace and Arms Control

November 18, 1981

United States Department of State
Bureau of Public Affairs
Washington, D.C.

Following is a speech by President Reagan before the National Press Club in Washington, D.C., November 18, 1981.

Back in April while in the hospital I had, as you can readily understand, a lot of time for reflection. And one day I decided to send a personal, hand-written letter to Soviet President Leonid Brezhnev reminding him that we had met about 10 years ago in San Clemente, California, as he and President Nixon were concluding a series of meetings that had brought hope to all the world. Never had peace and goodwill seemed closer at hand. I'd like to read you a few paragraphs from that letter.

> Mr. President: When we met I asked if you were aware that the hopes and aspirations of millions of people throughout the world were dependent on the decisions that would be reached in those meetings. You took my hand in both of yours and assured me that you were aware of that and that you were dedicated with all your heart, and soul, and mind to fulfilling those hopes and dreams.

I went on in my letter to say:

> The people of the world still share that hope. Indeed, the peoples of the world, despite differences in racial and ethnic origin, have very much in common. They want the dignity of having some control over their individual lives—their destiny. They want to work at the craft or trade of their own choosing and to be fairly rewarded. They want to raise their families in peace without harming anyone or suffering harm themselves. Government exists for their convenience, not the other way around.
>
> If they are incapable, as some would have us believe, of self-government, then where among them do we find any who are capable of governing others? Is it possible that we have permitted ideology, political and economic philosophies, and governmental policies to keep us from considering the very real, everyday problems of our peoples? Will the average Soviet family be better off or even aware that the Soviet Union has imposed a government of its own choice on the people of Afghanistan? Is life better for the people of Cuba because the Cuban military dictate who shall govern the people of Angola?
>
> It is often implied that such things have been made necessary because of territorial ambitions of the United States; that we have imperialistic designs and thus constitute a threat to your own security and that of the [illegible] emerging nations. There not only is no [illegible] to support such a charge, there is [illegible] evidence that the United States, when it [illegible] have dominated the world with no risk to itself, made no effort whatsoever to do so.
>
> When World War II ended, the United States had the only undamaged industrial power in the world. Our military might was at its peak—and we alone had the ultimate weapon, the nuclear weapon, with the unquestioned ability to deliver it anywhere in the world. If we had sought world domination then, who could have opposed us?
>
> But the United States followed a different course—one unique in all the history of mankind. We used our power and wealth to rebuild the war-ravaged economies of the world, including those nations who had been our enemies. May I say there is absolutely no substance to charges that the United States is guilty of imperialism or attempts to impose its will on other countries by use of force.

I concluded my letter by saying:

> Mr. President, should we not be concerned with eliminating the obstacles which prevent our people—those you and I represent—from achieving their most cherished goals?

It's in the same spirit that I want to speak today to this audience, and the people of the world, about America's program for peace and the coming negotiations which begin November 30th in Geneva, Switzerland. Specifically, I want to present our program for preserving peace in Europe and our wider program for arms control.

Preserving Peace

Twice in my lifetime I have seen the peoples of Europe plunged into the tragedy of war. Twice in my lifetime Europe has suffered destruction and military occupation in wars that statesmen proved powerless to prevent, soldiers unable to contain, and ordinary citizens unable to escape. And twice in my lifetime, young Americans have bled their lives into the soil of those battlefields—not to enrich or enlarge our domain but to restore the peace and independence of our friends and allies.

All of us who lived through those troubled times share a common resolve that they must never come again. And most of us share a common appreciation of the Atlantic alliance that has made a peaceful, free, and prosperous Western Europe in the postwar era possible.

But today a new generation is emerging on both sides of the Atlantic. Its members were not present at the creation of the North Atlantic alliance. Many of them do not fully understand its roots in defending freedom and rebuilding a war-torn continent. Some young people question why we need weapons—particularly nuclear weapons—to deter war and to assure peaceful development. They fear that the accumulation of weapons itself may lead to conflagration. Some even propose unilateral disarmament.

I understand their concerns. Their questions deserve to be answered. But we have an obligation to answer their questions on the basis of judgment and reason and experience. Our policies have resulted in the longest European peace in this century. Would not a rash departure from these policies, as some now suggest, endanger that peace? From its founding, the Atlantic alliance has preserved the peace through unity, deterrence, and dialogue.

First, we and our allies have stood united by the firm commitment that an attack upon any one of us would be considered an attack upon us all;

Second, we and our allies have deterred aggression by maintaining forces strong enough to insure that any aggressor would lose more from an attack than he could possibly gain; and

Third, we and our allies have engaged the Soviets in a dialogue about mutual restraint and arms limitations, hoping to reduce the risk of war and the burden of armaments and to lower the barriers that divide East from West.

These three elements of our policy have preserved the peace in Europe for more than a third of a century. They can preserve it for generations to come, so long as we pursue them with sufficient will and vigor.

Today, I wish to reaffirm America's commitment to the Atlantic alliance and our resolve to sustain the peace. And from my conversations with allied leaders, I know that they also remain true to this tried and proven course. NATO's policy of peace is based on restraint and balance. No NATO weapons, conventional or nuclear, will ever be used in Europe except in response to attack. NATO's defense plans have been responsible and restrained. The allies remain strong, united, and resolute. But the momentum of the continuing Soviet military buildup threatens both the conventional and the nuclear balance. Consider the facts over the past decade:

- The United States reduced the size of its armed forces and decreased its military spending. The Soviets steadily increased the number of men under arms. They now number more than double those of the United States. Over the same period the Soviets expanded their real military spending by about one-third.
- The Soviet Union increased its inventory of tanks to some 50,000 compared to our 11,000. Historically a landpower, they transformed their navy from a coastal defense force to an open ocean fleet, while the United States, a seapower with transoceanic alliances, cut its fleet in half.
- During a period when NATO deployed no new intermediate-range nuclear missiles and actually withdrew 1,000 nuclear warheads, the Soviet Union deployed more than 750 nuclear warheads on the new SS-20 missiles alone.

Our response to this relentless buildup of Soviet military power has been restrained but firm. We have made decisions to strengthen all three legs of the strategic triad—sea-, land-, and air-based. We have proposed a defense program in the United States for the next 5 years which will remedy the neglect of the past decade and restore the eroding balance on which our security depends.

I would like to discuss more specifically the growing threat to Western Europe which is posed by the continuing deployment of certain Soviet intermediate-range nuclear missiles. The Soviet Union has three different types of such missile systems—the SS-20, the SS-4, and the SS-5—all with a range capable of reaching virtually all of Western Europe. There are other Soviet weapons systems which also represent a major threat. The only answer to these systems is a comparable threat to Soviet targets. In other words, a deterrent preventing the use of these Soviet weapons by the counterthreat of a like response against their own territory.

At present, however, there is no equivalent deterrent to these Soviet intermediate missiles. And the Soviets continue to add one new SS-20 a week. To counter this, the allies agreed in 1979, as part of a two-track decision, to deploy as a deterrent land-based cruise missiles and Pershing II missiles capable of reaching targets in the Soviet Union. These missiles are to be deployed in several countries of Western Europe.

This relatively limited force in no way serves as a substitute for the much larger strategic umbrella spread over our NATO allies. Rather, it provides a vital link between conventional, shorter range nuclear forces in Europe and intercontinental forces in the United States. Deployment of these systems will demonstrate to the Soviet Union that this link cannot be broken.

Deterring war depends on the perceived ability of our forces to perform effectively. The more effective our forces are, the less likely it is that we'll have to use them. So, we and our allies are proceeding to modernize NATO's nuclear forces of intermediate range to meet increased Soviet deployments of nuclear systems threatening Western Europe.

Arms Control Negotiations

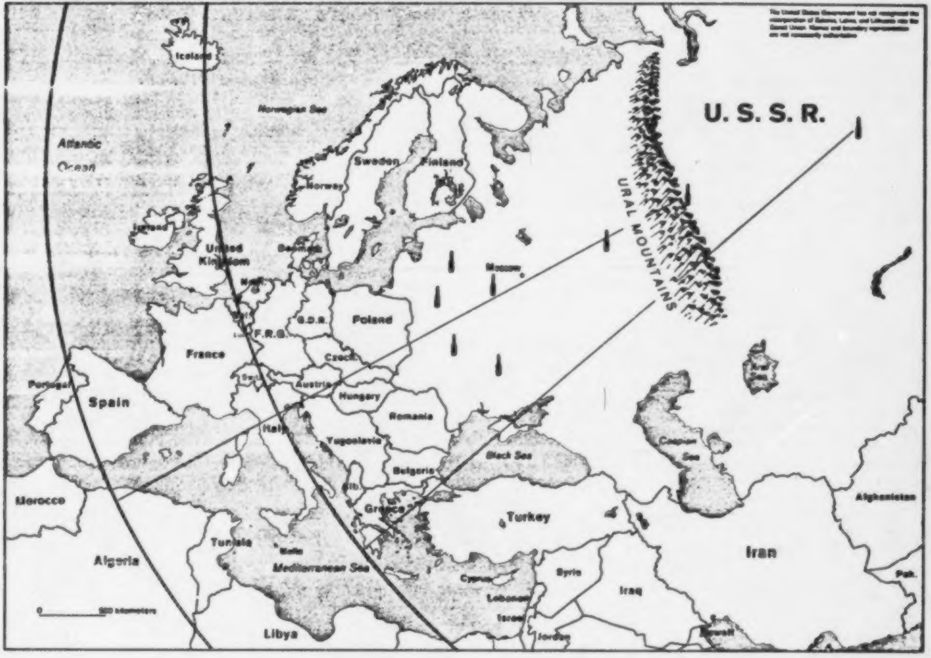
Let me turn now to our hopes for arms control negotiations. There is a tendency to make this entire subject overly complex. I want to be clear and concise. I told you of the letter I wrote to President Brezhnev last April. Well, I've just sent another message to the Soviet leadership. It's a simple, straightforward, yet historic message: The United States proposes the mutual reduction of conventional, intermediate-range nuclear and strategic forces. Specifically, I have proposed a four-point agenda to achieve this objective in my letter to President Brezhnev.

The first, and most important, point concerns the Geneva negotiations. As part of the 1979 two-track decision, NATO made a commitment to seek arms control negotiations with the Soviet Union on intermediate-range nuclear forces. The United States has been preparing for these negotiations through close consultation with our NATO partners. We are now ready to set forth our proposal. I have informed President Brezhnev that when our delegation travels to the negotiations on intermediate-range land-based nuclear missiles in Geneva on the 30th of this month, my representatives will present the following proposal: The United States is prepared to cancel its deployment of Pershing II and ground-launched cruise missiles if the Soviets will dismantle their SS-20, SS-4, and SS-5 missiles. This would be an historic step. With Soviet agreement, we could together substantially reduce the dread threat of nuclear war which hangs over the people of Europe. This, like the first footstep on the moon, would be a giant step for mankind.

We intend to negotiate in good faith and go to Geneva willing to listen to and consider the proposals of our Soviet counterparts. But let me call to your attention the background against which our proposal is made. During the past 6 years, while the United States deployed no new intermediate-range missiles and withdrew 1,000 nuclear warheads from Europe, the Soviet Union deployed 750 warheads on mobile, accurate ballistic missiles. They now have 1,100 warheads on the SS-20, SS-4, and SS-5 missiles, and the United States has no comparable missiles. Indeed, the United States dismantled the last such missile in Europe over 15 years ago.

As we look to the future of the negotiations, it is also important to ad-

Coverage of Europe From SS-20 Bases East of the Urals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dress certain Soviet claims which, left unrefuted, could become critical barriers to real progress in arms control. The Soviets assert that a balance of intermediate-range nuclear forces already exists. That assertion is wrong. By any objective measure, as this chart indicates [see below], the Soviet Union has an overwhelming advantage, on the order of six to one.

Soviet spokesmen have suggested that moving their SS-20s beyond the Ural Mountains will remove the threat to Europe. As this map demonstrates, the SS-20s, even if deployed behind the Urals, will have a range that places almost all of Western Europe, the great cities, Rome, Athens, Paris, London, Brussels, Amsterdam, Berlin, and so many more; all of Scandinavia; all of the Middle East; all of northern Africa—all within range of these missiles, which incidentally are mobile and can be moved on shorter notice.

The second proposal I've made to President Brezhnev concerns strategic weapons. The United States proposes to open negotiations on strategic arms as soon as possible next year. I have instructed Secretary Haig to discuss the timing of such meetings with Soviet representatives.

Substance, however, is far more important than timing. As our proposal for the Geneva talks this month illustrates, we can make proposals for genuinely serious reductions but only if we take the time to prepare carefully. The United States has been preparing carefully for resumption of strategic arms negotiations because we do not want a repetition of past disappointments. We don't want an arms control process that sends hopes soaring only to end in dashed expectations.

I have informed President Brezhnev that we will seek to negotiate substantial reductions in nuclear arms which would result in levels that are equal and verifiable. Our approach to verification will be to emphasize openness and creativity—rather than the secrecy and suspicion which have undermined confidence in arms control in the past.

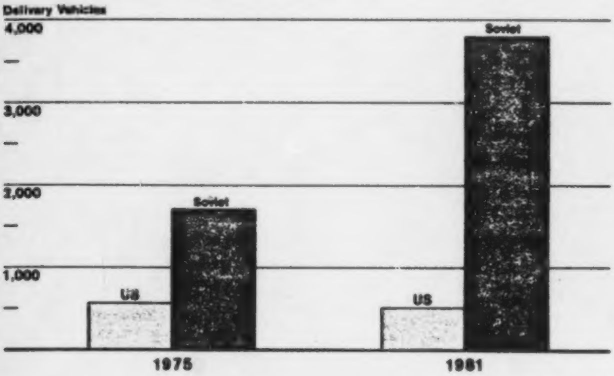
While we can hope to benefit from work done over the past decade in strategic arms negotiations, let us agree to do more than simply begin where these previous efforts left off. We can and should attempt major qualitative and quantitative progress. Only such progress can fulfill the hopes of our own people and the rest of the world. And let us see how far we can go in achieving truly substantial reductions in our strategic arsenals. To symbolize this fundamental change in direction, we will call these negotiations START—Strategic Arms *Reduction* Talks.

The third proposal I have made to the Soviet Union is that we act to achieve equality at lower levels of conventional forces in Europe. The defense needs of the Soviet Union hardly call for maintaining more combat divisions in East Germany today than were in the whole Allied invasion force that landed in Normandy on D-day. The Soviet Union could make no more convincing contribution to peace in Europe—and in the world— than by agreeing to reduce its conventional forces significantly and constrain the potential for sudden aggression.

Finally, I have pointed out to President Brezhnev that to maintain peace, we must reduce the risks of surprise attack and the chance of war arising out of uncertainty or miscalculation. I am renewing our proposal for a conference to develop effective measures that would reduce these dangers. At the current Madrid meeting of the Conference on Security and Cooperation in Europe, we are laying the foundation for a Western-proposed conference on disarmament in Europe. This conference would discuss new measures to enhance stability and security in Europe. Agreement on this conference is within reach. I urge the Soviet Union to join us and many other nations who are ready to launch this important enterprise.

All of these proposals are based on the same fair-minded principles: substantial, militarily significant reduction in forces; equal ceilings for similar types of forces; and adequate provisions for verification. My Administration, our country, and I are committed to achieving arms reduction agreements based on these principles. Today I have outlined the kinds of bold, equitable proposals which the world expects of us. But we cannot reduce arms unilaterally. Success can only come if the Soviet Union will share our commitment; if it will demonstrate that its often-repeated professions of concern for peace will be matched by positive action.

Balance of Comparable US and Soviet Intermediate Range Nuclear Forces



Key Intermediate-Range Land-Based Missiles

Soviet					US			
Type	Warheads per Missile	Number of Launchers Deployed	Total Warheads on Launchers	Range (km)	Total Warheads on Launchers	Number of Launchers Deployed	Warheads per Missile	Type
SS-20	3	250	750	4,400 to 5,000		—		—
SS-5	1	35	35	4,100		—		—
—				2,500	0 (464 planned)	0 (116 launchers, 4 missiles per launcher planned)	1	Ground-launched cruise missile
SS-4	1	315	315	1,900		—		—
—		—		1,800	0 (108 planned)	0 (108 planned)	1	Pershing II
Total		600	1,100		0 (572 planned)	0 (224 planned)		**Total**

U.S. Concept of Peace

Preservation of peace in Europe and the pursuit of arms reduction talks are of fundamental importance. But we must also help to bring peace and security to regions now torn by conflict, external intervention, and war.

The American concept of peace goes well beyond the absence of war. We foresee a flowering of economic growth and individual liberty in a world at peace. At the economic summit conference in Cancun, I met with the leaders of 21 nations and sketched out our approach to global economic growth. We want to eliminate the barriers to trade and investment which hinder these critical incentives to growth. And we're working to develop new programs to help the poorest nations achieve self-sustaining growth.

And terms like "peace" and "security," we have to say, have little meaning for the oppressed and the destitute. They also mean little to the individual whose state has stripped him of human freedom and dignity. Wherever there is oppression, we must strive for the peace and security of individuals as well as states. We must recognize that progress in the pursuit of liberty is a necessary complement to military security. Nowhere has this fundamental truth been more boldly and clearly stated than in the Helsinki accords of 1975. These accords have not yet been translated into living reality.

Today I have announced an agenda that can help to achieve peace, security, and freedom across the globe. In particular, I have made an important offer to forego entirely deployment of new American missiles in Europe if the Soviet Union is prepared to respond on an equal footing.

There is no reason why people in any part of the world should have to live in permanent fear of war or its specter. I believe the time has come for all nations to act in a responsible spirit that doesn't threaten other states. I believe the time is right to move forward on arms control and the resolution of critical regional disputes at the conference table. Nothing will have a higher priority for me and for the American people over the coming months and years.

Addressing the United Nations 20 years ago, another American President described the goal we still pursue today. He said, "If we all can persevere, if we can . . . look beyond our own shores and ambitions, then surely the age will dawn in which the strong are just and the weak secure and the peace preserved." He didn't live to see that goal achieved.

I invite all nations to join with America today in the quest for such a world. ■

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Current
Policy No. 389

Secretary Haig

The Strategic Arms Reduction Talks

May 11, 1982

United States Department of State
Bureau of Public Affairs
Washington, D.C.

Following is a statement by Secretary Haig before the Senate Foreign Relations Committee, May 11, 1982.

The timing of these hearings could not be better. We are about to enter a new phase of strategic arms control. On Sunday the President announced his desire to open Strategic Arms Reduction Talks (START) by the end of June. We have proposed to the Soviets that the talks take place in Geneva, and I hope we will be in a position to announce a specific date sometime in the next several weeks.

The decision to begin negotiations on strategic arms reduction is a crucial element in the President's comprehensive policy framework for arms control. In November we launched America into an entirely new area of arms control, that involving intermediate-range nuclear forces. More recently we have begun to participate in efforts within the 40-member U.N. Committee on Disarmament to elaborate a total ban on chemical weapons. We are also engaged in discussions in that forum on nuclear testing. In Vienna negotiations on reductions in conventional forces in Europe are underway. In the coming months, we will renew our efforts to make progress there.

Each of these negotiations is important in its own right. Together they present an opportunity to strengthen deterrence and to reduce the risk of war at all levels. But it is important to remember that arms control is a means to an end, not an end in itself.

Our objective is to sustain our national security in a changing international environment and in the face of an expanding Soviet force. Arms control can play a very important part in strengthening our security and restraining the growth of Soviet power through mutually beneficial agreements. But arms control can succeed in this task only if it is coordinated in a strategy that employs the other diplomatic, political and economic assets at our disposal. This means, among other things, that we must demonstrate our will and capacity to maintain the military balance. It means that we should consult closely with our allies. And it also means that we should seek balanced, equal, and verifiable agreements that reduce the risk of war by reinforcing deterrence.

Our preparations for START have reflected these considerations. The President's proposals have also benefited from the lessons of a decade of American experience with the SALT [Strategic Arms Limitation Talks] process. Ironically, the strategic arms competition so troubling to us all reached new heights during the very period when the SALT negotiations seemed so promising.

We, therefore, developed eight criteria with which to judge alternative approaches to strategic arms control, and these have guided our recent decisions on START.

First, a START agreement must permit the United States to develop and possess sufficient military capability to deter the Soviet Union and to execute the U.S. national military strategy, taking into account the military capability that would be allowed the Soviet Union under such an agreement.

Second, an agreement must be based on the principle of equality. Nothing less than equality is acceptable in the provisions of any future strategic arms limitation agreement for military and political reasons.

Third, a START agreement must promote strategic stability by reducing the vulnerability of U.S. strategic forces.

Fourth, there must be effective verification with the necessary counting rules, collateral constraints, and cooperative measures.

Fifth, an agreement must lead to substantial reductions. We took as a given that whatever unit of account was adopted should lend itself to substantial reductions below current levels of forces and that reductions should be to equal ceilings.

Sixth, we must be able to explain our objectives and proposals in clear and simple terms to insure that our START approach would enjoy broad public support.

Seventh, our approach had to take into account those matters of particular concern to our allies, including the ability of the United States to maintain a credible deterrent, the relationship of the START approach to the INF [intermediate-range nuclear forces] negotiations, and the likelihood of success.

Eighth and finally, we needed to devise a sustainable position, which could provide a framework for detailed negotiations and the basis for an eventual agreement, even in the face of initial Soviet resistance. This meant the position needed to be demonstrably fair, mutually beneficial, and realistic.

Based upon these criteria, the President has set a new, more demanding goal for strategic arms negotiations. Our objective is to achieve significant reductions in the most destabilizing nuclear systems, especially intercontinental ballistic missiles, thereby strengthening deterrence and stability both for ourselves and for our allies and friends.

To achieve this objective, we will propose to the Soviets in Geneva a practical plan for phased reductions of strategic weapons. This plan is designed to reduce the risk of war by securing agreed steps which will enhance the stability of the strategic balance. Such a goal can be achieved best by negotiating significant reductions in the most destabilizing weapons possessed by both sides—their numbers, their warheads, their overall destructive potential. This will be the primary focus of U.S. efforts.

In Geneva the United States will propose that, at the end of the first stage of START reductions, ballistic missile warheads be reduced to equal levels at least one-third below current numbers. The United States will propose that, to further enhance stability, no more than half these warheads be deployed on land-based missiles. We wish to see these warhead reductions, as well as significant reductions in deployed missiles, achieved as quickly as possible.

The conclusion of such an agreement would provide the best possible basis for negotiations leading to a second-phase agreement imposing equal ceilings on other elements of U.S. and Soviet strategic nuclear forces, including equal limits on ballistic missile throw-weight at less than current U.S. levels. In both phases we will naturally insist on verification procedures to insure compliance with the agreement.

As President Reagan has noted, these proposals represent a very serious and ambitious undertaking. The sheer physical task of reducing U.S. and Soviet strategic forces and reshaping them to enhance stability will undoubtedly take years of concentrated effort. We believe, however, that the United States and the Soviet Union together can remove the instabilities that now exist and reduce significantly nuclear forces on both sides.

Our ability to achieve these ambitious goals depends, in large measure, on the Soviets' willingness to negotiate seriously and in good faith. How seriously they will negotiate depends, in turn, on their view of how the military and political environment will look without an agreement. If we fail to adopt the President's military modernization program, we will reduce not the nuclear danger but, instead, the chances of reaching an arms control agreement on strategic forces. A demonstrated willingness to maintain the balance, through unilateral efforts, if necessary, is as indispensable to the success of our efforts at strategic arms reductions as INF modernization is to the success of the ongoing talks in Geneva. More than any other single defense or political initiative, the President's strategic modernization program and the Congress' support for the modernization program will make, or break, our attempt to negotiate a reasonable arms control agreement.

The need to maintain the Soviet incentive to negotiate reductions in destabilizing systems would also be undercut by endorsement of many of the nuclear freeze proposals before us. Most proposals would freeze the existing instabilities and perpetuate existing Soviet advantages. They would eliminate the incentives for the Soviets to negotiate toward the even lower levels of nuclear weapons that we can achieve. We want to go beyond a freeze and do better. We believe we can achieve real reductions and thus lessen the risk of war.

We all understand, and share, the anxiety that motivates those who support the freeze. We all agree that we must not miss this opportunity to make a major step toward meaningful arms control and significant reductions. We are concerned, however, that a freeze on nuclear weapons could frustrate our attempts to achieve stability and balance in this critical area.

The discussions and debates on nuclear policy in the Congress and the country reflect both public concern and our capacity as a democracy to discuss the great issues of today. They have helped to focus American attention on the difficult task ahead of us. We particularly support the objectives set by Senators Warner, Jackson, and others for significant reductions in the number of weapons. We hope, however, that this debate will not culminate in fresh battle lines between divided factions but rather a new national consensus in support of the President's proposal for a fair, realistic, and truly beneficial strategic arms agreement.

We feel confident that a better understanding of the needs of deterrence, the state of the military balance, and the possibilities for arms control will result in strong support for the initiatives we have taken to modernize our forces and to reduce the burden of arms, and the risk of war, through negotiation. Such support will be crucial in convincing the Soviets that we are determined to compete and at the same time that we are eager to reach a meaningful agreement. The incentives for real arms control exist. We have both the means and the duty to supply them. As we embark on this vital enterprise, now is the time to rally behind the President's proposals. ■

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East-West Arms Control

PREPARED STATEMENT OF HON. EUGENE ROSTOW, DIRECTOR, ARMS CONTROL AND DISARMAMENT AGENCY

I am pleased to have this opportunity to report to your two Subcommittees on developments in the talks with the Soviet Union on the control of intermediate-range nuclear weapons, in the setting of the cognate problem of controlling and reducing Soviet and American intercontinental nuclear weapons. These subjects can never be considered separately, since the longer range weapons can also be aimed at targets in Europe, Japan, or other areas of supreme importance to our security. They should be viewed, necessarily, as two aspects of the same problems -- those of nuclear deterrence on the one hand, and alliance solidarity -- or what is called "decoupling" in the jargon of arms control -- on the other.

The negotiations on intermediate-range nuclear forces which began last November 30 in Geneva are an important element in our strategy for establishing and preserving peace. I want to sketch the background, development, and current status of these negotiations in the context of our foreign and defense policy as a whole.

Like most arms control issues these days, INF has to be viewed against the background of the significant change that has taken place in the nuclear balance over the last 20 years, because of the Soviet Union's relentless

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pursuit of nuclear superiority over the United States both in intermediate range and strategic weapons. When the Soviet Union deployed a large number of missiles of intermediate-range aimed at Western Europe in the early 1960s, we were concerned. That was the source of the controversy about "the missile gap." However at that time, the risk to Europe was minimized by the overall American advantage in intercontinental weapons. Our nuclear deterrent was fully and visibly credible. Although our advantage in intercontinental range weapons had begun to erode, as was the case by the time we concluded the SALT I agreements in 1972, the United States and its NATO allies nonetheless refrained from raising the issue of Soviet INF.

Perspectives changed in the middle Seventies, however, and concern became more acute both in Europe and in the United States. Japan and many other countries followed these developments closely. The cause of the change in perspective was obvious: The development of Soviet INF capacity through the multiple warhead SS-20 missile program, coupled with the massive Soviet buildup in strategic and conventional forces. The members of NATO and many other countries ultimately dependent on the American nuclear guaranty concluded they had to react, after the Soviet Union had ignored repeated Western warnings about the gross imbalance that was being created.

The logic behind the Western reaction to the Soviet grey-area weapons is brutally simple. The huge and growing Soviet advantage in intermediate-range nuclear weapons of great accuracy and power is designed to intimidate and paralyze our Allies in Europe and elsewhere while the changing balance in intecontinental nuclear weapons makes the American strategic nuclear guaranty less and less credible. At a given point, the Soviet strategists hope such doubts would become an overwhelming political force, dividing our Allies from the United States, and leaving the United States isolated and impotent in a hostile world. Henry Kissinger and others articulated these anxieties during the late Seventies, but the concern would have been just as acute if Mr. Kissinger had never spoken. It was -- and still is -- the most dramatic example we have yet witnessed of the stunning political impact of the existence -- not the use -- of nuclear weapons.

The Soviets have claimed from time to time that the SS-20 did not disturb the balance on the ground that it is merely a modernization and partial replacement of the older SS-4s and 5s, which, they say, are to be withdrawn from service and scrapped. The fact is, however, that the SS-20 represents a leap ahead in the INF field, both

both qualitatively and quantitatively. It is a modern highly accurate missile with three warheads (the SS-4s and 5s had only one) and a range of about 5,000 kilometers. Thus, each SS-20 could hit three targets in NATO Europe even from bases in Siberia. Moreover, it is mobile. The Soviets have been deploying it, along with its associated launch equipment, at an average rate of one a week since the beginning of the program and now have 280 launchers in place, with 840 warheads. Add to this the fact that 300 SS-4s and 5s are still in place and you have a total of nearly 600 long-range INF missiles with over 1100 warheads most of which are now aimed at Europe, or can readily be aimed at targets in Europe or Japan or at targets which may become critical in the Middle East or elsewhere, depending upon the evolution of the Soviet desire for power. Moreover, the SS-20 has an inherent and survivable refire capability which will be taken into account from the beginning in assessing its destructive capacity.

The implacable growth of the Soviet SS-20 program gave rise to the NATO two track decision of December 1979 to deploy 224 Pershing II and ground-launched cruise missile launchers with 572 missiles in several Western European countries and, at the same time, to seek arms control negotiations with the Soviets which would reduce the numbers of these weapons on both sides. From the beginning of our Alliance deliberations on this matter, we have agreed with our Allies that both parts of the 1979 decision were of equal importance. We have begun the negotiations and are pursuing them vigorously and in good faith. Our allies, for their part, are in agreement with us that preparations for deployment must go forward and that, in the interest of allied security and stability, we must demonstrate that we are prepared to carry out our program, including the beginning of deployments in 1983, unless there is a negotiating result that makes it unnecessary. Without that clear determination, the Soviets would have no incentive to negotiate seriously.

I should like to expand on this last point because it is intimately related to the political problems both we and some of our allies -- particularly certain of the basing countries -- have had to face in respect to the NATO modernization decision. The argument that you have to arm (or be fully prepared to do so) in order to achieve equitable arms control agreements is not an easy one for Westerners to accept, but it is nevertheless a fundamental axiom of successful arms control negotiations with the Soviet Union, and of critical importance in the present case. As I remarked earlier, the Soviet Union refused to negotiate at all about intermediate range missiles until the United States with Allied approval had firmly decided to make ground-based cruise missiles and Pershing IIs and deploy them in Europe. We are negotiating from a situation in which the USSR now has the advantage of large numbers of weapons in place while our counter to this threat consists of a program to put offsetting INF systems into Western Europe starting in late 1983. To be sure, our program is established and well under way and we have the strong support of our NATO allies for it, despite the political problems it creates for some of them at home. But the Soviet Union is not yet convinced of the need to negotiate seriously. Until it comes to accept that necessity, for any one of a number of reasons, or for several in combination, it will continue to conduct the INF negotiations not as part of a quest for stability and peace, in which the United States and the Soviet Union necessarily share equal responsibility, but as a tactical effort to divide the United States from Europe, from Japan, and from its other allies and vital interests; to prevent American and Allied military modernization; and to destroy the credibility of the American nuclear guaranty. In short, the Soviet Union is not yet negotiating. It is playing to the galleries of public opinion in the NATO countries, Japan, the ANZUS allies, and other Western nations.

I am sorry I must report this to you. Ambassador Nitze and his excellent negotiating team are doing their best to overcome these attitudes -- and their best is very good indeed -- and we in Washington are supporting their efforts in every possible way.

The basic US negotiating position in the INF talks was stated by the President in a speech on November 18, 1981. It is based on a set of ideas fully considered by our NATO allies and fully supported by them. We are approaching the problem of the intermediate range missiles in the setting of the START problem -- that is, the problem of intercontinental nuclear weapons. And we wish to begin with the most destabilizing weapons in this category, the land-based missiles of great accuracy and power, like the SS-20s. We are prepared to cancel our program for the deployment of Pershing II missiles and GLCMs if the Soviets will destroy all of their SS-20 missiles and retire and scrap the older SS-4s and 5s. This proposal is simple and straightforward. And it addresses itself to the systems which are of most concern to both sides. The President made it clear that we will negotiate in good faith and consider any proposals made by the Soviet Government.

Not surprisingly, the Soviets have taken a different approach. Mr. Brezhnev laid out a good part of their position when he visited Bonn last November, just before the negotiations began; and Moscow elaborated on it in a public statement early this month. Basically, the Soviet proposals to this point consist of two related ideas: a moratorium for the duration of the negotiations; and a program of equal reductions based on the assumption that both sides are now equal in intermediate range missiles. The proposed agreement, which would expire in 1990, would reduce each side to 300 "systems" by that year.

The Soviet proposal is confined to the development and deployment of new "medium range" systems (i.e., those with a range of more than 1000 km and less than 5500 km) in Europe or "intended for use in Europe," and on the improvement of existing systems. The restriction of the Soviet proposal to systems deployed in Europe "or intended for use in Europe," whatever that phrase may mean, is a sufficient ground in itself for rejecting the proposal. There would be no benefit to the stability of the world political system if missiles now targeted on Europe were moved Eastward, where they could threaten Japan, South Korea, and other United States interests in the Far East. And we must never forget that the SS-20 is mobile. Systems which are moved to the East can also be moved back to the West.

The moratorium proposed by the Soviet Union would last for as long and only as long as the negotiations for a more permanent agreement continue. Obviously this proposal would relieve the Soviet Union of any pressure to negotiate seriously.

The Soviet reduction proposals are based on its moratorium scheme. They provide for a program of reductions to be carried out throughout the 1980s: reductions in NATO "medium range" nuclear systems in the territory of Europe, in the waters adjacent to Europe and intended for use against targets in Europe down to 600 NATO systems by 1985 and to 300 by 1990, with reductions by the Soviet Union to the same levels. This agreement would expire in 1990 unless renewed.

The Soviet moratorium proposal would effectively kill NATO's Pershing II and GLCM modernization program, while permitting the Soviets to produce an unlimited number of SS-20s and deploy them in the eastern USSR. Put more simply, it would deprive us of an important means to restore the nuclear balance in Europe -- the means we and our Allies chose after careful deliberation in 1979 as the most appropriate and effective means to that end. The more permanent agreement the Soviet Union has proposed, coupled with its moratorium proposal, if carried out as the Soviets envision it, would not permit the US at any time to have Pershing II missiles, GLCMs or comparable missiles in or near Europe and would leave the Soviet SS-20 essentially untouched. Under the Soviet proposal, the Soviet Union could have 300 SS-20 launchers in European Russia -- an increase in their capabilities -- and any number of such launchers in Siberia. If British and French systems were counted, as the Soviets insist they must be, the United States by 1990 would be left with virtually no INF systems in Europe while the SS-20 program could proceed at full throttle. In essence, we are being asked to accept and perpetuate an overwhelming nuclear Soviet advantage based on the rationale that the Soviet Union has more enemies than the United States and thus has a "right" to more offensive systems.

The Soviet spokesmen are still refusing even to consider INF as a global negotiation. Until now they have insisted on talking not about INF but about Euromissiles. Their goal is transparent.

We remain convinced that true parity between the two leading nuclear powers, the Soviet Union and the United States -- true parity, that is, in allowing each side the equal capacity to deter aggression against its vital interests -- is of itself an important goal for each nation, indeed the supremely important goal of its foreign and security policy, if each side is interested in restoring and preserving the system of peace. If parity in this sense can be achieved it would be a giant step, as President Reagan said on November 18, towards the possibility of peace.

The Soviet perception of the problem in the INF talks is altogether different from our own. The question of which systems are to be counted in order to establish a basis for reductions lies at the heart of our difference with them. By counting British and French systems, as well as NATO nuclear capable aircraft (and by leaving out thousands of the corresponding systems on their side), the Soviets have stated that a rough balance" now exists which would be upset by the projected NATO deployments. Indeed, one of the greatest weaknesses of the Soviet position is that they have been making this argument about a "rough balance" throughout the period of SS-20 deployment. They said the same things about the "balance" several years ago when they had only a few of these weapons in the field. Curiously enough, year after year, the Soviet calculation of the supposed balance always comes out at about 1000 on each side.

The assertion of an existing balance is fundamental to the proposals the Soviets have made so far, as it is to all aspects of the Soviet position. We made it clear last August that in both the INF and START negotiations we should insist that each side take responsibility for data about its own forces. But we have not yet reached an agreed data base for the negotiations. In alleging that a balance in INF exists, the Soviets choose to ignore the fact that the USSR has an enormous numerical advantage over NATO in the field of nuclear capable aircraft as well as in the missile field. Their so-called balance seems to omit literally thousands of

Soviet nuclear capable aircraft with capabilities comparable to the US aircraft they include. Rather, they choose to focus attention on US so-called "forward-based systems" (FBS). When they talk about FBS, as they have since the negotiation of SALT I, the Soviets mean US nuclear-capable aircraft based in Europe, or on aircraft carriers, whose range permits them to reach the territory of the USSR. The Soviets contend that a qualitative difference exists between our airplanes in this category and their own, because theirs cannot reach the continental United States.

This is a significant argument, which throws a clear light on the Soviet Union's major interest in these negotiations thus far -- to drive a wedge between the United States and its Allies. Soviet spokesmen are trying simply to create doubt in the minds of our Allies -- and in our own -- about the credibility of our basic commitment -- that we should regard an attack on an ally or any other vital American security interest as an attack on the United States. One obvious implication of this attitude is the relegation of the countries of Western Europe and our other Allies to second class status, their security being less important than that of the super powers. At the same time, it is a shorthand way of saying that the US has no business being in Europe. To accept such an argument would be to agree that the NATO Alliance rests on a false foundation. But no one knows better than the intelligent strategists and planners of the Soviet political military establishment that the independence of Western Europe is a vital American security interest. In their doctrine, as I remarked earlier, Soviet control of Western Europe is the first of their military objectives and the key to Soviet dominance in Asia and the Third World generally.

It is hardly necessary to comment on the Soviet proposal, which is a bare-faced claim not to equality but to hegemony. The fact that it has been made at all dramatizes the tragic gravity of the situation. As I carry on this work, I often wonder, to recall Churchill's famous quip, what kind of people do they think we are.

Without going into detail about the conduct of the negotiations, I should like to set forth briefly for you the most important principles underlying our position.

1. Focus first on land-based missiles in the upper part of the INF spectrum. These are, as I have already

said, the weapons seen as most threatening by both sides. Just as we in the West have been deeply concerned by the SS-20 program, the Soviets -- although as a negotiating tactic they profess concern over nuclear-capable aircraft -- have reacted most sharply to the projected deployment of Pershing II rockets and GLCMs. These then are the weapons to which our negotiators are addressing themselves in the first instance. Their elimination would enhance the security of the Alliance and should be the priority objective of the negotiations.

2. The need to limit systems without regard to location. Although the SS-20 is a large MIRVed system with a range of almost 5000 km, it is nonetheless sufficiently mobile and transportable so that efforts to ban it with respect to specific regions would not be meaningful arms control. SS-20s deployed East of the Urals can still target NATO Europe; and even those deployed in the far eastern part of the USSR present a threat to the basic security interests of the United States in the Far East and the Middle East, and, because of their mobility, to the NATO Alliance as well. We must, therefore, seek to ban these missiles everywhere, not just in Europe.

3. Negotiation on US and Soviet systems only. In bilateral negotiations it would be inappropriate for the US and the USSR to negotiate over the systems of any third country. The USSR knows that British and French forces are independent national systems. The US will not accept anything less than equality in US and Soviet INF missiles and will not agree to include or compensate for British and French forces. Those forces exist and are maintained for absolutely basic reasons of British and French national interest. We respect those interests and accept them. We shall do nothing to undermine them in any way. We obviously cannot trim our sails to fit a Soviet view which maintains that Soviet forces must be equivalent to the aggregate of all its potential adversaries throughout the world. This is a claim of a right to hegemony which cannot be discussed or negotiated. The Soviet Union could easily eliminate the basis for such concerns by giving up its aggressive, expansionist course, and undertaking to live by the rules of the United Nations Charter governing the international use of force.

4. Equality in Outcome: Equal limitations and equal rights: reductions in order to achieve truly equal deterrent capacity. The principle of de jure equality is fundamental to balanced arms control and to an East-West

relationship based on mutual restraint and reciprocity. This requires the negotiation of equal ceilings and rights for both sides. One-sided arms control proposals which fail to provide equality as an outcome will not enhance security.

Our purpose in having nuclear weapons is defensive and deterrent -- to prevent aggression against our vital national interests. The Soviet purpose, as we can see vividly in the case of the intermediate range missiles now targeted on Europe, is to serve as the ultimate engine of a process of nuclear blackmail -- a process of expansion involving the use or the credible threat to use propaganda, terrorism, proxy war, subversion, or Soviet troops under the sanction and protection of Soviet nuclear superiority. It follows that in these negotiations, we must pay much more attention to the distinction between retaliatory weapons and weapons which can also be used for purposes of coercion or first strike. Weapons like the SS-20 and the Soviet big intercontinental range ICBMs are conspicuous examples of such weapons.

This is the fundamental reason why we have proposed dismantling the entire class of Soviet intermediate-range ground-launched missiles in exchange for our promise not to make or deploy Pershing II and intermediate range ground launched nuclear cruise missiles. The equality we seek between the United States and the Soviet Union is equality in deterrent capacity. To achieve that result in the area of intermediate range nuclear weapons fully justifies the President's proposal of November 18.

The Soviet Union criticizes our proposal as unfair and inequitable -- a proposal for unilateral disarmament. Soviet representatives stand, so far, on proposals designed to look like programs for equal reductions from an equal base. As I have pointed out, the base is not equal. But even if it were, it would not follow that equal reductions are the only possible road to an equal result. The United States and the Soviet Union are not peasants in a country market, haggling over the price of pigs. We are the two leading nuclear powers in the world, possessing arsenals of frightening power and menace. It is our responsibility -- our equal responsibility -- to do whatever is necessary to draw mankind back from the edge of the abyss. That is the perspective in which we approach the problem of negotiating with the Soviet Union about reducing the menace of intermediate range and intercontinental nuclear weapons.

5. Arms control verification. The history of arms control negotiations, including both their successes and

their failures, demonstrates convincingly the need for effective provisions to verify compliance. Such provisions can help establish confidence between the parties and permit them to enter into agreements affecting their vital security interests. Without such assurance, any agreement would be a source of uncertainty and instability. Soviet secrecy is in itself destabilizing and will have to be overcome if arms control is to succeed. It seems quite clear to me that the arms control agreements we are now seeking -- and this, of course, applies to START as well as to INF -- cannot rely exclusively on national technical means. If we are to achieve success, in other words, the Soviets will have to modify their historical resistance to cooperative methods of verification. The Soviet Union has agreed to the principle, although it will continue to place primary reliance on national technical means of verification. We have welcomed this assurance, and look forward to discussing the degree to which cooperation in verification will be necessary. But the fact that they will be necessary seems to me indisputable. Indeed, basing our proposal on a ban rather than on numerical limitations should ease the verification problem in any INF agreement.

6. Other limits. An agreement must, of course, provide against the future develoment of systems comparable to the ones it bans. At the same time, some collateral constraints will be needed to keep it from being undermined by unbanned systems of shorter range.

Unless the Soviet leaders see a blinding light on the road to Damascus -- we can hope for such a result, but hardly count on it -- we must assume that the road ahead will be long, slow, and hard. If the Soviet Union negotiates as it has in the past, we should not look for a break in the negotiating pattern until just before the Pershing IIs are due to be deployed. Until then, we must be steady and patient, keeping American and Allied public opinion thoroughly informed, and proceeding methodically with our plans for modernizing our armed forces. At this point, neither optimism nor pessimism is justified. Our attitude is one of determination to initiate, to persevere, and to imagine, seeking to understand the Soviet outlook fully and sympathetically, and to take advantage of every opportunity to persuade. It is most unlikely that we shall be able to convince the Soviet Union within the framework of the nuclear equations alone. We are therefore approaching the task of arms control negotiation, as I have emphasized from the beginning of my term last June, by viewing arms control as an integral part of our foreign and defense policy as a whole.

In that perspective, we note that the Soviet Union has profound reasons to want a period of stability in its relations with the West. Its situation in Poland has grave and far-reaching potentialities. Its economic and social problems are real. Above all, the Soviet Union ought to be ready, after nearly sixty-five years of devoting an extraordinarily large fraction of its resources to pursuing the chimera of empire, to embrace the tasks of peace on the basis of the humanity we all share and our common obligation to avoid the unthinkable horror or nuclear war. I must tell you, however, that unless extraordinary change should occur in the Soviet Union, the present Soviet leadership; and any likely combination of its successors would accept such an outcome of our negotiating effort only if it is apparent that continuing on its present course will surely confront the Soviet Union with unacceptable risks.

The "Continuing Imperative" of Strategic Arms Control

Prepared Statement of Dr. Sidney D. Drell

Thank you for the opportunity to testify on this most vital issue of the future of arms control. Mr. Chairman, may I begin by saying how important it is to hold public hearings such as today's. The better we understand the nature and severity of the threat of our nuclear weapons, the better we can meet the challenge to control them and thereby increase our chances for survival. A determination to succeed in meeting this challenge must be a sacred, moral commitment to future generations yet unborn. As President John Kennedy said in 1963 in discussing the problems of securing world peace: "Control of arms is a mission that we undertake particularly for our children and grandchildren . . . they have no lobby in Washington."[1]

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[1] Quoted in *"Kennedy, Khrushchev and the Test Ban,"* Glenn T. Seaborg (University of California Press, 1981).

Reproduced from U.S. Congress. Senate. Committee on Foreign Relations. Subcommittee on Arms Control, Oceans, International Operations and Environment. The future of arms control. Hearings, 97th Cong., 2d sess. Washington, U.S. Govt. Print. Off., 1982. p. 19-28.

In my testimony I will describe three general principles based on the technical realities of nuclear weapons that should guide our decisions concerning arms and arms control. I will also make a specific proposal which, if negotiated by the United States and the Soviet Union, would lead to major and balanced reductions in the numbers of nuclear warheads deployed on both the long-range strategic and the intermediate-range systems. The promising features of this proposal are in flexibility and its simplicity.

NATURE OF THE THREAT

Nuclear weapons are weapons of mass destruction. Yields are measured in megatons. One megaton (MT) is equal to one million tons of TNT equivalent, six megatons is equal to all the bombs dropped by all sides in World War II. The destructive potential of one megaton represents a leap by a factor of a million beyond ordinary chemical explosions and by a factor of a hundred beyond the small atom bombs that devastated Hiroshima and Nagasaki. A single megaton warhead on one of the thousands of missiles in today's strategic armories could do the following:

Cause complete destruction of ordinary structures (brick houses and the like) as far away as 3 miles—or within a 30-square-mile area. Minor damage would extend some 13 miles away;

Create potentially lethal winds of speed greater than 100 miles per hour (mph) out to distances of 6 or more miles; i.e., within an area of greater than 100 square miles; wind speeds would exceed 200 mph within a 50-square mile area;

Cause severe second-degree burns on a clear day out to distances of 11 miles; i.e., to anyone exposed in an area of almost 400 square miles.

Cause blindness due to retinal burns to anyone looking at the fireball at distances of 30 to 40 miles; and

Make up to 1,000 square miles of the earth's surface uninhabitable to unsheltered humans for long periods of time due to the prompt radio-active fallout if it is detonated near the surface of the earth.

A one-MT explosion over the Bay Area could cause one to two million casualties; and this is the effect of just one MT of the more than ten thousand MT's poised today in the world's nuclear arsenals.

An all-out nuclear conflict involving a large fraction of the approximately 50,000 nuclear bombs currently deployed by the U.S. and the Soviet Union would shatter the entire fabric of our society and of the civilization built over centuries by the human spirit and human genius. What we must do today is to face, to understand, and to meet the challenge of avoiding a nuclear holocaust. One hears a lot these days about the "*window of vulnerability.*" The window of vulnerability that concerns me the most in today's nuclear over-armed world is not differences between U.S. and Soviet weapons; it is our vulnerability to nuclear immolation because of the very existence of these weapons.

THE "CONTINUING IMPERATIVE" OF ARMS CONTROL

More than twelve years have gone by since the U.S. and the Soviet Union initiated the process of formal strategic arms negotiations designed to limit the build-up of nuclear arms and to reduce the threat of nuclear war. These negotiations have been both difficult and valuable, resulting in the SALT I treaty severely limiting the deployment of ballistic missile defenses (ABM); the SALT I interim agreement freezing the number of launchers of offensive missile (ICBM's and SLBM's) which formally expired in 1977, but is still being honored; agreed procedures for aiding verification of the treaty provisions by "*national technical means*", i.e., satellite and ground-based sensors; and the Standing Consultative Commission for resolving verification or compliance issues as they arise. A SALT II treaty was also negotiated in 1979 with valuable provisions that extend the agreed means of verification and introduce counting rules and limits on all central strategic offensive missiles. There is a very important and precedent-setting step toward a weapons freeze in SALT II which allows the two countries to introduce only one new type of land-based ICBM. I support the ratification of SALT II not only because of these useful provisions, but because it provides an agreed basis from which to initiate substantive, verifiable, and balanced reductions in the next step of the nuclear arms reductions process.

With or without SALT II, however, the record of accomplishments of the past twelve years is disappointing. During this period, and despite intense negotiations, the nuclear forces of both the United States and the Soviet Union have continued to improve in quality and to increase in numbers. As a result of advances in weapons technology we are now entering an even more dangerous era in which confidence in mutual deterrence is eroding. In its place we hear more and more of usable nuclear weapons and of limited nuclear war-fighting and war-winning. Such visions of nuclear war-fighting and winning are phantoms that are both dangerous and technically unsound! There are two basic reasons for saying this:

(1) There is a great danger that once the first nuclear weapon is used in anger, the nations involved—with their vital interests at stake—will dig ever deeper into their vast reserves of approximately 50,000 nuclear weapons. There is neither experience nor historical precedent to give much hope that the consequences of such a war will be anything less than total nuclear devastation.

(2) There is no technical basis for any confidence that it will be possible to control the escalation of a limited nuclear conflict. It is in the nature of a command, control, and communication (C^3) system that basic elements of it, such as its "eyes," cannot be hidden from the enemy. It, thus, has vulnerable parts. With one's C^3 system diminished, and threatened, how will it be possible to exercise escalation control?

We face today, with ever increasing urgency, what President Eisenhower called "the continuing imperative" for "disarmament with mutual honor and confidence" in his famous farewell to the nation on his retirement from the presidency in 1960. He spoke, as he reminded us on that occasion, "as one who has witnessed the horror and the lingering sadness of war—as one who knows that another war could utterly destroy this civilization which has been so slowly and painfully built over thousands of years."

THREE GUIDING PRINCIPLES

The challenge to begin making timely progress toward removing the threat of nuclear war is the most important challenge in international relations. There are three general principles that I consider as essential for guiding our defense and our negotiating policies toward such a goal. They are based on the technical realities of nuclear weapons.

(1) Nuclear weapons are fundamentally different from non-nuclear ones. They have a long and deadly radioactive memory. They are weapons of mass destruction, and the possibility of using such weapons raises for all of us fundamental ethical and moral issues. Nuclear war would be so great a human disaster and so great a physical catastrophe for our environment and ecosphere that the unknowns of a nuclear conflict dwarf the known and the predictable. This point has been stressed by all official Government and Congressional studies in recent years. The objective and sober report in 1979 by the Congressional Office of Technology Assessment on "The Effects of Nuclear War," comes to the conclusion that:

"The effects of nuclear war that cannot be calculated are at least as important as those for which calculations are attempted. Moreover even these limited calculations are subject to very large uncertainties. . . . This is particularly true for indirect effects such as deaths resulting from injuries and the unavailability of medical care, or for economic damage resulting from disruption and disorganization rather than direct destruction."

Nuclear war would indeed have no winners.

(2) The sole purpose of nuclear weapons in today's world, and for as long as they are deployed, must be to deter nuclear war. No other purpose should be assigned to nuclear weapons. They are not a substitute for our maintaining adequate conventional military forces for meeting our vital national security goals and commitments. Furthermore, I conclude, on technical grounds alone, that there is no effective defense against the almost total mutual annihilation and devastation that would result from a full-scale nuclear war. In words that Lord Mountbatten wrote[2] just before his assassination:

"As a military man who has given half a century of active service I say in all sincerity that the nuclear arms race has no military purpose. Wars cannot be fought with nuclear weapons. Their existence only adds to our perils because of the illusions which they have generated."

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[2] *"A Military Commander Surveys the Nuclear Arms Race,"* Lord Louis Mountbatten, International Security, vol. 4, No. 3 (Winter 1979/80).

(3) Arms Control is an essential part of our national security. Thus far we have had no effective controls on offensive nuclear weaponry, and it is clear that each step forward in the arms race toward more and improved weapons has lessened our security. If we are to reverse this trend, it will be necessary to understand the arms control impact of new weapons before deciding whether to deploy them. The importance of the arms control factor was understood, and played an essential role, in the ABM debate more than a decade ago. This also led to our negotiating the SALT I treaty that severely limits ABM deployments.[3] By way of contrast, we lost an important opportunity for arms control by the decision to press ahead with the technology of multiple independently targetable warheads, or MIRV's, without first making a serious effort to avoid their extensive deployment.[4] We can now see the dollar and strategic costs of that lost opportunity in the form of the MX program. The MX is designed to be the U.S. response to the growing threat to our land-based Minuteman ICBM force posed by the highly accurate and reliable MIRV'd ICBM's now being deployed by the Soviet Union. The MX is a symbol of the failure of arms control! It is always wise to base strategic forces so they can survive an attack. During times of heightened tension or crisis it is especially important if we are to maintain strategic stability for these forces not to present vulnerable targets that can tempt a preemptive strike. Therefore, I favor sensible efforts to preserve a highly survivable deterrent force. Stability as enhanced if both the United States and the Soviet Union have confidence in that survivability, and our future defense programs should be structured and limited with this goal in mind.

LIMITING WARHEADS, OR RV'S

In accord with these three guiding principles our negotiating efforts at the upcoming Strategic Arms Reduction Talks (START) should aim for a treaty that:

(1) enhances strategic stability based on a balance of highly survivable and secure deterrent forces;

(2) initiates significant, timely, and verifiable reductions in the nuclear forces and destructive potential of both nations;

(3) is conceptually simple so as to be readily explained and comprehended in the broad public debate; and

(4) is highly flexible, allowing the two countries to implement the negotiated provisions by means of selective reductions in accord with their very different technological and bureaucratic styles. While these reductions must be equitable, they may, at the same time, be asymmetric.

In order for us to achieve these four goals, I believe it is essential to limit and reduce the number of deployed nuclear warheads, or reentry vehicles (RV's), more effectively than in the past. The SALT II treaty puts equal limits, category by category and on the aggregate number of launchers. However the treaty, as signed though not ratified, constrains the number of warheads deployed only indirectly by putting a large maximum on the permitted warhead fractionation (14 RV's per SLBM and 10 per ICBM along with a freeze on current force loadings per type of ICBM). It may even be viewed as providing an incentive for developing and deploying large, highly MIRV'd missiles. In fact, this trend is evident in the modern missiles of both the Soviet Union (i.e., the SS-18 with 10 RV's and the SS-19 with 6 RV's) and the U.S. (i.e., the MX with 10 RV's). In particular, the extensive deployment of accurate, highly MIRV'd Soviet ICBM's has caused serious and valid concerns about the vulnerability of the U.S. land-based ICBM force. Furthermore, the treaty limits are perceived by some to be unequal because of the larger size of Soviet ICBM's. This concern has led, on the one hand, to broad opposition to SALT II within the United States and, on the other hand, to very complex provisions that have dulled the over-all impact of the treaty and obscured the recognition that the treaty's provisions are equitably balanced. Evidently, numerical limits on launchers alone cannot provide an adequate basis for continuing successful negotiations.

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[3] This year is the tenth anniversary of the ABM treaty, and its scheduled five-year review conference marks an important occasion for arms control. I see no persuasive reason to consider modifying the ABM treaty in 1982. During the past decade improved radar, interceptor, and computer technologies have enhanced the capabilities of terminal ABM for hard targets. This is particularly true for low-value targets so that the defense can be effective even if there is a significant leakage. Thus, for example, the defense of a single RV missile can be successful if it costs the offense several additional RV's as the price for a successful attack. Research and development toward improved concepts of terminal defense can and should continue in accord with the treaty provisions, but it would be premature to consider modifying its provisions. A major consideration in modifying or terminating the SALT I ABM treaty during the 1980's will be its effect on our allies. In particular, with the technologies in hand and foreseeable for the near future, a nationwide ABM for the defense of cities and industry will be effective only against very low levels of attack. Therefore, if nationwide ABM defenses were deployed by the Soviet Union, their greatest potential effect would be to blunt the limited deterrent threats of China, France, and Great Britain. Such a development, which is likely to occur if the ABM treaty is terminated could hardly be viewed as in U.S. interests. Overall, the treaty remains the most substantive achievement in arms control between the U.S. and the Soviet Union.

[4] Currently we face the possibility of adding a new dimension of competition to the arms race in space. In particular, a large fleet of directed energy (laser or particle beam) battle stations based in space is described as a new option for the intercept of an ICBM attack during launch phase. I see no prospect of deploying an effective defense of this type when the feasibility and costs of such an enterprise are considered—including the number and sizes of such battle stations, the possibilities of the directed energy beams being diverted and confused before causing damage, and the vulnerabilities of the battle stations and their command links. The immediate challenge to be addressed is whether this new dimension of potential arms competition in space can be terminated by negotiation before it builds up momentum. Such negotiations will necessarily be difficult, since it will be necessary to define acceptable limitations on the development of anti-satellite threats against low-orbit communications and reconnaissance satellites as well as against high-altitude systems.

Another static measure of the effectiveness is the throw-weight (or volume) of the strategic missile and bomber force. A limitation on throw-weight is, in my view, both unnecessary and undesirable. It is unnecessary for two reasons. The first reason is that, given the present level of destructive potential in U.S. and Soviet arsenals, the warhead yields are far less significant measures of effectiveness than are their accuracies, and these will continue to improve toward pinpoint precision with allowed testing and modernization programs. This is especially true for hard-point targeting, where high accuracies, either already achieved or anticipated, are rapidly making throw-weight and megatonnage almost meaningless indicators of strategic efficacy, as illustrated in Figure 1. The second reason is that a counting rule that includes the number of warheads already includes in its count any additional warheads that are deployed in order to exploit a throw-weight advantage. It would also be undesirable to include throw-weight as a parameter in the limits because such a provision would confuse differences in technological style and sophistication between the U.S. and Soviet Union with differences in force effectiveness. For example, the Soviet Union has deployed its "heavy" SS-18 ICBM with 10 warheads, the same number which the U.S. plans for the new MX missile now being developed. Although the throw-weight of the MX is approximately one-half that of the SS-18's, i.e., 7,500 pounds relative to 15,000 pounds, the MX incorporates the most modern technology and can be expected to be a more accurate and reliable weapons system than the SS-18. As a consequence, I exclude throw-weight from any future counting system because it is neither sufficiently flexible nor simple.

Conceptually, the simplest way to satisfy the four goals listed above would be to negotiate equal limits on the total number of RV's deployed by the U.S. and by the Soviet Union. Such a provision would be flexible, allowing each country to meet its requirements of highly survivable forces by choosing the appropriate mix of sea, air, and land basing. A suitably negotiated numerical limit on RV's would lead to substantial force reductions. Verification of such a provision would be accomplished by the same rule currently in force,[5] according to which each missile is counted as if it is deployed with the maximum number of warheads observed during the test flights by that same type of missile.

Aside from these evident advantages, a counting rule that includes only RV's has several disadvantages. The disadvantages include:

It is a sudden and large wrench from the approach to date at SALT of counting launchers (i.e., ICBM silos, SLBM tubes, and strategic bombers)

If no limits are put on them, the number of launchers may increase substantially beyond the SALT ceilings already negotiated.

LIMITING LAUNCHERS PLUS RV'S: "L+RV"

It is possible to avoid the disadvantages indicated for RV limits only and at the same time meet the four goals of enhanced stability, reductions, simplicity, and flexibility by means of a limitation on the combined total of launchers plus RV's, i.e., an "L+RV" limit.[6]

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[5] I refer here to the "missile type" and "launcher type" rules negotiated in SALT II. SALT II also provides for setting up procedures to dismantle or destroy systems to meet agreed ceilings.

[6] This idea was first introduced and discussed in collaboration with Kent Wisner ("A New Formula for Nuclear Arms Control," Sidney D. Drell and Kent F. Wisner, International Security, vol. 5, No. 3, Winter 1980/81).

In practical terms there is little difference between a limit on "L+RV" and a limit on RV's alone when comparing highly MIRV'd missiles. This is illustrated in Table I:

TABLE I

System	Number of RV's	"L+RV" count
Soviet SS-18	10	11
Soviet SS-19	6	7
United States MX	10	11
United States Trident I (C4)	8	9

The difference in these two counting rules shows up effectively only in the weight of single RV missiles relative to highly MIRV'd ones. For example, if RV's alone are counted, one Soviet SS-18 with 10 RV's would be given the same weight as 10 single warhead U.S. Minuteman II missiles. However, according to their "L+RV" count two SS-18's with an "L+RV" weight if 2×11=22 would be balanced against eleven Minuteman II's, each with an "L+RV" weight of 2. The latter seems to be a more realistic balance of their strategic values. In particular, a single RV missile has no need for a MIRV bus to carry and dispense the individual warheads to different targets. Therefore, it can devote a larger fraction of its throwweight to deliverable megatonnage and should be given a higher weighting, as is assigned by the "L+RV" formula. Furthermore there is a very much smaller probability that all of a large number of single RV missiles will fail than there is of one highly MIRV'd missile with the same number of warheads. Hence the former deserve greater weight because of this increased insurance against total failure.

An "L+RV" counting scheme is simple to explain and comprehend. With reference to the strategic missiles and long-range bombers as defined in SALT II, each ICBM, SLBM, and bomber, counts as a launcher; each warhead on an ICBM and SLBM, and each bomb or ALCM on a bomber counts as an RV. In this counting scheme the "L+RV" ceiling can be set so as to require substantial reductions. Since each nation can choose which of its systems to remove in order to meet an agreed ceiling, "L+RV" is a highly flexible scheme. Finally, the "L+RV" counting scheme can improve stability because it makes it costly to deploy large numbers of those particular systems that both the U.S. and the Soviet Union view as most threatening in each other's forces: i.e., the massive Soviet SS-18's, each one with an "L+RV" weight of 11, and SS-19's with a weight of 7; and the U.S. MX also with a weight of 11, and the B-52 and B-1B bomber with 20 of the new ALCM's, with a weight of 21. This should make the "L+RV" formula attractive to both the U.S. and the Soviet Union since it provides strong incentive for preferential reductions of these systems which constitute a first-strike threat without the need of specifying selective and rigid quotas.

A PROPOSAL FOR STRATEGIC SYSTEMS: "L+RV"≤8,000

An "L+RV" quota of 8,000 for strategic systems "ICBM's, SLBM's, and long-range bombers) together with the SALT II restrictions on the modernization of land-based ICBM's, is a simple and powerful combination for effective arms control. The limit "L+RV"≤8,000 represents a reduction by close to a factor of two relative to the maximum deployments of 2,250 launchers and approximately 13,000 RV's permitted by the SALT II provisions. In this sense it is a major cut from present limits. The SALT II restriction on modernizing land-based ICBM's limits each country to one new type and forbids rebasing or major improvements of the large Soviet SS-18's. It is a significant and verifiable step toward a possible freeze on nuclear weapons. It has the practical advantage of turning on a freeze gradually so that its impact is not sensitive to the actual date on which it is initiated.

Such a proposal can be implemented in many different ways in order to maintain a highly survivable deterrent. One example of a balanced U.S. deployment is given for illustrative purposes in Table II.

TABLE II.—U.S. DEPLOYMENT, "L+RV"≤8,000 FOR STRATEGIC SYSTEMS

System	Launchers	Reentry vehicles	"L+RV"
ICBM's:			
MM-III	244	(x3) 732	976
MM-II	125	(x1) 125	250
MX	42	(x10) 420	462
Subtotal	411	1,277	1,688
SLBM's:			
Trident: 12 SSBN's Trident II missile	288	(x6) 1,728	2,016
Poseidon: 14 SSBN's Trident I missile	224	(x8) 1,792	2,016
Subtotal	512	3,520	4,032
Bombers: B-52/B-1B/Stealth:			
With ALCM's	80	(x20) 1,600	1,680
With bombs	120	(x4) 480	600
Subtotal	200	2,080	2,280
Total	1,123	6,877	8,000

Although the U.S. would still face the problem of "ICBM vulnerability," this threat would be significantly reduced for two reasons. First of all the MIRV'd ICBM force of the United States that could be targeted after the proposed reductions comprises less than 17 percent of the RV count in Table II. In constructing this example we have transferred part of the relative weight of this force to the Trident II force which should achieve comparable capabilities to the ICBM's. Secondly, the size of the threatening Soviet MIRV'd ICBM force would almost certainly be greatly reduced from its present very high level. A very compelling reason for the Soviets to substantially reduce their commitment to a large silo-based MIRV force, which currently comprises approximately one-third of their launcher and three-fourths of their RV totals, would be provided by the threat to their silos by the postulated U.S. deployment of 420 MX and 732 Minutemen III (MM III) RV's, plus the 1,728 Trident II warheads. Presumably the Soviet force mix would still retain a heavier emphasis on land-based ICBM's, but would evolve in the direction of a more balanced mix closer to the U.S. mode of Table II. Under such an assumption it would no longer provide the Soviet Union with the great excess of accurately MIRV'd RV's that marks its current deployment.

This example illustrates the more general fact that fixed, land-based ICBM's have grown vulnerable as a result of the improvements in accuracy and reliability of today's missiles, and this vulnerability is independent of how the missiles are counted. This vulnerability can be viewed as a far more manageable risk at these much lower deployment levels. Alternatively, the U.S. can further reduce the risk by deploying the MX missile at sea on small diesel submarines (the SUM system) which has been shown to be a highly survivable basing by virtue of its mobility and quietness.[7]

Other proposals for reducing ICBM vulnerability are less attractive or technically impractical. The difficulties of a massive multiple protective shelter system for basing the MX, such as proposed during the Carter Administration, have been too well exposed and discussed to repeat here. I agree with President Reagan's decision to scrap that proposal. An ABM defense of MX silos has also been suggested by some. I have studied this problem and, to the best of my technical judgment and knowledge, there is no ABM defense concept that can effectively defend the MX in a silo. The problem is that one can exact the price of at most a few attacking RV's per silo with a layered hard-point defense. That however is not good enough because it does not provide a favorable exchange ratio to the defender if the value of the target is as high as an MX with its 10 RV's.[8]

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[7] *"Testimony on Basing the MX at Sea on Small Submarines: The SUM System,"* Sidney D. Drell, before the Defense and Military Construction Subcommittees of the Senate Appropriations Committee, June 19, 1981; and the secret 1980 JASON Summer Study Technical Report JSR-80-83, September 1980, *"Smallsub Underwater Mobile Basing of ICBM's"* (U). This deployment has the additional advantage of classifying the MX as a sea-based missile. The U.S. would then still be allowed one new ICBM type within the SALT II provisions. This would lead to modernization of the Minuteman II force if warranted at some future time. A balanced deployment along these lines would be configured with more MX's at sea and new single RV ICBM's, and fewer Poseidon boats.

A COMPREHENSIVE PROPOSAL: "L+RV" $\leq$9,000 FOR ALL NUCLEAR SYSTEMS OF RANGE GREATER THAN 1,000 MILES

Advances in weapons technology are making it increasingly difficult to identify a category of strategic nuclear weapons for negotiating purposes as distinct from the many other widely deployed nuclear forces. The problem of the TU-26M Backfire bomber has been a particularly vexing one for SALT II. Similarly, there is little political or military logic in seeking constraints on intermediate range nuclear systems, such as the Soviet SS-20 IRBM and the planned NATO deployment of the U.S. ground-launched cruise missiles (GLCM's) and Pershing II's, without accompanying constraints on deployments of the intercontinental systems. This was recognized in the NATO decision of December 1979.

The "L+RV" counting scheme provides a natural approach for combining these systems into a single negotiating framework. In particular, a limit on the "L+RV" total of all nuclear forces of range in excess of 1,000 miles would have the logic of including the most threatening/destabilizing systems of both sides no matter where they are deployed. It would also have the following two advantages:

Soviet Backfire bombers would be included in the count without any further controversy as to whether or not they are strategic.

It would be easier to reach a compromise on differences in detail between Soviet and U.S. intermediate range systems. Inevitably, there will be detailed differences between the U.S. and the Soviet Union when they add up the "L+RV" count of the intermediate range nuclear forces depending on where and how some of these forces are based. This is particularly true for the count of aircraft such as the U.S. F-4's and carrier-based A-7E's capable of long-range one-way missions if armed with nuclear bombs. The Soviet Union also has many aircraft in this category. Although these differences may seem significant in the balance of these forces alone, they will have only a marginal effect on the much higher total "L+RV" count.

TABLE III.—"L+RV" COUNT FOR THEATRE NUCLEAR FORCES OF THE UNITED STATES AND THE SOVIET UNION WITH RANGES $\geq$1,000 MI

	Launchers	Reentry vehicles	"L+RV"
For the United States:			
F-111 (United Kingdom based)	156	(x2) 312	468
F-111A [1]	65	(x5) 325	390
GLCM (planned)	(464)	(x1) 464	[2] 464
Pershing II	(108)	(x1) 108	[2] 108
F-4 [3]	250	(x1) 250	500
Total			1,930
For the Soviet Union:			
TU-26M Backfire	65	(x4) 260	[4] 325
SS-20	(175)	(x3) 525	[5] 525
SS-4	(340)	(x1) 340	[5] 340
SS-5	(40)	(x1) 40	[5] 40
TU-16 Badger, TU-22 Blinder	340	(x2) 680	1,020
Total			2,250

[1] Not included in table II.

[2] A GLCM is counted only as an RV in keeping with the counting rule in table II for the air-launched cruise missiles. So is an IRBM.

[3] This is ½ of the nominal total deployment, based on an assumption that ½ of the F-4's are assigned to nonnuclear missions.

[4] This is a rough number (New York Times, Nov. 22, 1981) counting only the bombers assigned to Soviet long-range air and not to their naval forces. This choice corresponds to not including U.S. domestic-based F-111's.

[5] The IRBM/MRBM count is only of RV's and not of launchers in keeping with the convention adopted for ALCM's and GLCM's. Also only the NATO-based SS-20's are included. This number for the SS-20 is possibly too low since identified nearby "reload" missiles must also be included.

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[8] ABM would be a feasible option for defending effectively a lower value target such as an ICBM with one, or only a few, RV's. I do not now support a proposal to modify or to terminate the ABM treaty of SALT I for reasons given in footnote 3 on page 22.

Table III suggests a counting formula of the intermediate range nuclear forces, currently deployed or committed, which indicates a reasonable balance. Some of the individual launcher numbers are very rough and appear only for notional purposes. I propose a limit of: "L+RV" ≤9,000 to be applied to all nuclear forces of range in excess of 1,000 miles and with the counting provisos indicated in Table III. An "L+RV" total of about 8,000 for the strategic systems, as discussed earlier, plus 1,000 for the intermediate range systems accommodates roughly one-half the planned totals of each.

GLCM's are counted only as RV's in Table III in keeping with the rule applied to ALCM's for the strategic systems in Table II where the bomber on which they were loaded served as the launcher. It follows that, in an equitable and balanced counting scheme, the intermediate range ballistic missiles (the SS-4 MRBM's the SS-5 IRBM's, and the Pershing II IRBM's) should also be weighted according to their RV count and not as launchers. We have applied that rule in Table III while at the same time counting aircraft as launchers. There is evidently some arbitrariness in the count assigned to the long range theatre nuclear forces but, as noted above, these differences are relatively minor in adding up the total "L+RV" count of 9,000 for all systems of range greater than 1,000 miles. The actual choice of minimum range is also arbitrary but I define 1,000 miles to include the Pershing II launchers. They present a particular threat to Moscow which is no more than five minutes away from their planned launch areas.[*]

The "L+RV" counting formula that I have proposed here shares a feature in common with all counting schemes: a single aspect, if looked at in isolation and in too fine a detail, can appear inequitable. For example, this formula may seem prejudicial against the United States because we would be eliminating more RV's from currently planned deployments than the Soviet Union in order to meet the 9,000 "L+RV" ceiling. On the other hand, the Soviet Union would be eliminating warheads of greater yield, and hence greater megatonnage, as it cut down on large ICBM's in order to avoid a disproportionate concentration of its forces in only a small number of vulnerable launchers. In evaluating such balances and trade-offs it is important to avoid getting enmeshed in a maze of such details alone and thereby losing sight of the decreasing security and the enormity of the danger of a continuing nuclear arms build-up. There is little sense in attempting to fine tune a nuclear balance at these levels of destruction. There is, however, both urgency and importance to removing the nuclear sword of Damocles that so ominously threatens our survival.

SUMMARY

The "L+RV" proposal offers a promising approach in our striving for progress in arms control during the 1980's. A quota of "L+RV" ≤ 9,000 on all systems of range greater than 1,000 miles together with the SALT II restrictions on the modernization of land-based ICBM's forms an effective arms control proposal with many advantages: It is simple and flexible and will enhance stability by making the deployment of highly MIRV'd ICBM's so "costly." The proposal is a gradual and verifiable step toward an eventual freeze. It is a 50 percent reduction from present ceilings on strategic systems. Were we to negotiate such a treaty—and soon—it would be a major advance in arms control relative to the painfully slow progress thus far and would be welcome evidence of our coming of age in meeting the nuclear challenge.

One can well envision bolder and more comprehensive steps than I have presented here. In my proposal I have limited my goals not because of any military need for retaining as many as one-half of our presently deployed nuclear weapons, but because I judge this to be a proposal that is practical to negotiate both domestically and with the Soviet Union. However, only the negotiations themselves can tell whether it is, in fact, a practical and timely step. To take that step there must exist a strong political will and commitment by our leaders. I hope that will be the case. I am encouraged by recent statements by President Reagan and Secretary of State Haig putting strong emphasis on the importance of arms reduction and expressing the Government's commitment to working for progress at the negotiating table.

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[*] In the interest of strategic stability it would be very desirable to banish all weapons deployments of such immediate threat to each nation's capital. Necessary provisions of such a ban would also include minimum stand-off distances for the deployments of the SLBM forces. It would be highly desirable to negotiate such a provision in the next round of arms reduction talks.

I am also encouraged by the resurgence of informed public interest in nuclear weapons and policy. Public hearings such as you are holding here today add importantly to the expansion of that interest. In our society there is no substitute for, nor power equal to that of, a responsible public constituency that is informed on the basic issues of nuclear weapons policy. One need not master all technical details in the arms control debate, but the question of scale must be comprehended. Neither Americans nor Russians must ever forget the enormity of the destructive power of the nuclear weapons we are dealing with and the scale of human tragedy and suffering if they were ever used.

Twenty-five years ago the late General Omar Bradley, the great American GI's general of World War II, emphasized [10] the gravity of the challenge posed by nuclear weapons. Let me conclude with his words, which apply today with even greater urgency:

The central problem of our time—as I view it—is how to employ human intelligence for the salvation of mankind. It is a problem we have put upon ourselves. For we have defiled our intellect by the creation of such scientific instruments of destruction that we are now in desperate danger of destroying ourselves. Our plight is critical and with each effort we have made to relieve it by further scientific advance, we have succeeded only in aggravating our peril.

If I am sometimes discouraged, it is not by the magnitude of the problem, but by our colossal indifference to it. I am unable to understand why . . . we do not make greater, more diligent and more imaginative use of reason and human intelligence in seeking an accord and compromise which will make it possible for mankind to control the atom and banish it as an instrument of war.

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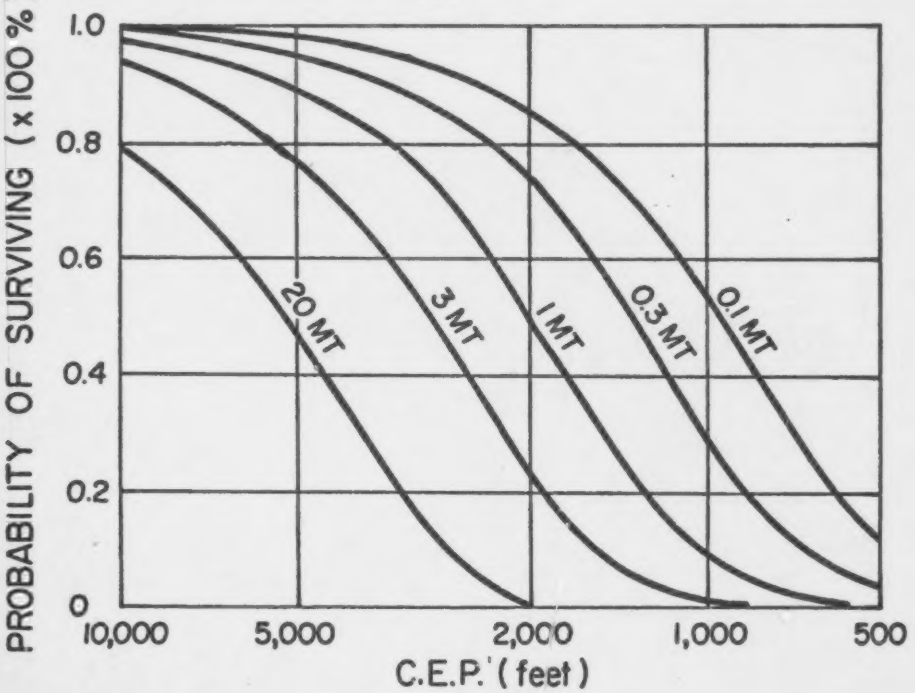
[10] In a commencement address at St. Alban's School in Washington, D.C., as reprinted in the New York Times (April 10, 1981) from the November 18, 1957, issue of I. F. Stone's weekly.

Fig. 1



Probability of a target hardened to withstand one thousand pounds per square inch of overpressure (1,000 P.S.I.) plotted versus the accuracy of the attacking warhead (C.E.P.) in feet. The individual curves are labelled with the megatonnage of the arriving warhead.

The U.S. Nuclear Stockpile

Materials Production and New Weapons Requirements

William M. Arkin, Thomas B. Cochran and Milton M. Hoenig

Arms control negotiations have benefited the release of information on the number and characteristics of weapons systems. Much of the official data on the nuclear arsenals of the superpowers is now available to the public. Conspicuous in its absence, however, has been information about the size and characteristics of the nuclear stockpiles. William M. Arkin, Thomas B. Cochran and Milton M. Hoenig have pieced together the composition of the U.S. nuclear stockpile from open sources. The final picture they draw is critical in understanding the imperative for and implications of arms control.

The authors are co-editors of the forthcoming Nuclear Weapons Data Book (prepared by the National Resources Defense Council and to be published by Ballinger) from which the information in this article is excerpted.

The size and state of the U.S. nuclear stockpile[1] has remained fairly constant throughout the 1970s. During the 1980s, however, the rate of production and retirements will increase and the complexion of the stockpile will change markedly. Many older weapons are being withdrawn as a new generation of nuclear warheads is produced. The present increase in the rate of warhead production is being accompanied by substantial measures to increase the supply of nuclear materials. Nuclear weapons plans for the late 1980s and early 1990s, however, project further materials shortages in the face of production increases and an accelerated generational turnover of warheads.

Mass production of nuclear wearheads began in 1947 with the B3, the production model of the FAT MAN nuclear bomb dropped on Nagasaki, Japan. Since then there have been 58 nuclear warhead types produced. Many warhead models have been used in a variety of weapons configurations and delivery systems. Over 20 additional warhead designs never progressed past the development stage. As indicated in Figure I, between 1955 and 1965, the number of weapons produced was massive. Over 30,000 warheads entered the stockpile during this period. The stockpile growth rate peaked in the period from 1958 to 1960 when approximately 12,000 warheads were added to the nuclear arsenal. In 1967, the stockpile reached its all time high of some 32,000 warheads. That number dropped to 27,000 by 1970, increased to about 29,000 by 1974 and since then has declined to its current size of some 26,000 nuclear warheads.[2]

While the stockpile was made up predominantly of tactical weapon warheads in the 1960s, the mix is now about evenly split between strategic and tactical weapons. Reductions in the stockpile over the past twenty years represent shifts in the mix or characteristics of the weapons rather than any real decline in military capability.[3] The deployment of thousands of multiple reentry vehicles on missiles in the 1970s, for instance, sharply increased the number of strategic warheads but did not result in a significant change in stockpile size.

Since their introduction, nuclear weapons have acquired a continually increasing importance in all aspects of military nuclear stockpile (see Table I), ranging from man portable nuclear land mines weighing about 150 pounds (W54 Special Atomic Demolition Mine or ADM) to multi-megaton bombs weighing more than 8000 pounds (B53 strategic bomb). Nuclear warheads are fitted to almost every weapons type, and used by the military services for almost all warfare roles.

Six warhead types are in production today, including the air-launched cruise missile warhead (W80), Minuteman III Mark 12A warhead (W78), the B-61 bomb, Trident I warhead (W76), the Lance missile enhanced radiation warhead (W70), and the 8-inch artillery enhanced radiation shell (W79). Sixteen additional types are in research and development (Table III) and three of these (the B-83 bomb, W-84 ground-launched cruise missile, and W-85 Pershing II) are slated to enter production next year.

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The Nuclear Stockpile

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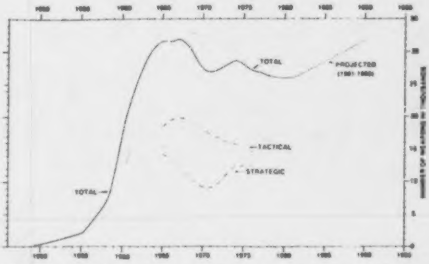
The Stockpile Memorandum

The requirements for new warheads are determined by the Departments of Defense and Energy, and then approved by the President in an annual Nuclear Weapons Stockpile Memorandum. Congress, through approval of the budgets of the Departments, confirms both the weapon systems and warhead plans of the Executive. Traditionally, however, little critical oversight of the specifics of warhead production or materials supply has taken place. This is mostly due to the excessive secrecy surrounding nuclear warhead plans.

The Stockpile Memorandum determines the rate of warhead production and retirements over a period of fifteen years including materials requirements (prior to the 1982 Memorandum, the period was eight years). In the first five years of the Memorandum schedule, the specific rate of warhead production and retirement is detailed by warhead type and is closely tied to weapon system deployment plans. Beyond this period, only gross projections of retirements and new production are provided. Contingency requirements for rapid production increases are also computed in the out years of the Memorandum. The 1981 Memorandum, signed by President Carter in October 1980, authorized a substantial increase in new warhead production and growth in the size of the stockpile. The 1982 Memorandum, signed by President Reagan in early 1982, approved changes in the mix of warheads but authorized only a slight increase over the 1981 Carter plans. Reportedly, that increase amounts to 380 warheads over a five year period. These plans project a progressively increasing gap between production and retirement rates in the mid and late 1980s.

It is estimated that some 23,000 new nuclear warheads are planned for construction during the next ten years and an additional 14,000 are identified in current research and development programs throughout the mid-1990s (Table 3).[4]

Figure I



Figures for tactical and strategic breakdown available only from 1965 to 1980.

The U.S. Nuclear Stockpile 1949-1990

During the late 1970s, an average of approximately 1,000 warheads were produced annually, and approximately 1,300 warheads were retired. The new production rates, however, will roughly double the rate of the late 1970s. The 1981 Memorandum called for a "dramatic increase in warhead production."[5] Despite this increase in warhead production the "total magnitude of the stockpile" will not change "in any great consequence."[6] According to DOE, "the stockpile will remain well below the historic highs established in the late sixties."[7] This is due to the concomitant increase in the rate of warhead retirements. Table I identifies those warheads earmarked for retirement in the current Memorandum.

Requirements in the 1980s

The aspect of current nuclear plans which has received considerable attention is the availability of nuclear materials needed to cover the increases. During the Carter Administration, a number of special studies on future nuclear materials requirements were conducted and concluded that there would be a shortage of materials in the 1980s. Until the early 1960s, an important determining factor in overall stockpile size was the amount of nuclear materials available. Today, this factor continues to strongly affect planning on the character and mix, if not the overall size, of the stockpile.

Nuclear warheads contain one or more of the materials plutonium or highly enriched uranium and tritium. The type and mix of materials used has changed over time due to new warhead designs. Most modern warheads utilize plutonium, predominantly for the fissile primary component, rather than the highly enriched uranium used in many older weapons. Plutonium is used to obtain a high yield-to-weight ratio and small size. The new neutron yield warheads are also creating significant new requirements for tritium, traditionally used to obtain yield selection and boosting. Over 1,000 neutron yield artillery and missile warheads are scheduled for construction and future plans call for an enhanced radiation anti-ballistic missile warhead. Thus while the projected size of the stockpile in the 1980s will not exceed the record level

Table I
THE UNITED STATES NUCLEAR STOCKPILE

Warhead/Weapon	Year First Deployed	Yield (Kilotons)	User	Number in Stockpile*	Status
W25/GENIE	1957	1-5	AF	400	*To be replaced by new air-to-air missile*
B28/BOMB†	1958	1,100	AF,MC,N	1,200	*To be replaced by B-83*
W31/NIKE HERCULES†	1958	1-20	A,NATO	750	*Being withdrawn*
/HONEST JOHN†	1958	1-20	NATO	200	*Only left in Greek and Turkish armies*
W33/8" ARTILLERY	1956	sub-12	A,MC,NATO	2,000	*To be replaced by W79*
B43/BOMB	1961	500-1,000	AF,MC,N,NATO	2,220	*To be replaced by B83*
W44/ASROC	1961	1	N	850	*To be replaced by ASW warhead/standoff weapon*
W45/TERRIER†	1956	1	N	310	*To be replaced by W81*
/MEDIUM ADM†	1964	1-15	A,MC,NATO	300	*To be withdrawn*
W48/155mm ARTILLERY	1963	sub-2	A,MC,NATO	3,500	*To be replaced by W82*
W50/PERSHING 1A	1962	60-400	A,NATO	410	*To be replaced by W85*
B53/STRATEGIC BOMB†	1962	9,000	AF	150	*To be withdrawn*
W53/TITAN II†	1963	9,000	AF	65	*To be withdrawn starting late 1982*
W54/SPECIAL ADM	1964	01-1	A,MC,NATO	300	*No planned replacement*
W55/SUBROC†	1965	1-5	N	400	*To be replaced by ASW warhead/standoff weapon*
W56/MM II	1966	1,000-2,000	AF	540	*To be partially replaced with Minuteman III/MX*
B57/DEPTH BOMB	1964	sub-20	AF,MC,N,NATO	1,000	
B61/BOMB	1968	100-500	AF,MC,N,NATO	3,000	*In production*
W62/MK-12 MM III	1970	170	AF	1,200	*Being partially replaced by W78*
W68/POSEIDON	1971	40-50	N	3,480	*Being partially replaced by W76*
W69/SRAM	1972	170	AF	1,140	*To be replaced by Lethal Neutralization System*
W70/LANCE	1972	1-1000	A,NATO	565	*In production, circa 380 neutron types planned*
W76/TRIDENT I	1979	100	N	1,300	*In production, circa 3600 planned*
W78/MK-12A MM III	1979	335	AF	540	*In production, 1,083 planned*
W79/8" ARTILLERY	1981	1	A,MC,NATO	120	*In production, circa 800 planned*
W80/AIR-LAUNCHED CRUISE MISSILE	1981	200	AF	80	*In production, 4,348 planned*

Sources: Derived from the *Nuclear Weapons Data Book* (prepared by the Natural Resources Defense Council and published by Ballinger)

*Authors' estimates of stockpile breakdown of 26,000 weapons as of January, 1982

†Weapons planned for retirement in 1982-1987, as called for in present plans. Other weapons will begin retirement or partial removal in the mid-1980s but are not indicated.
Users include the Air Force,
Marine Corps, Navy, Army and the North Atlantic Treaty organization

The Nuclear Stockpile

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Table II

Projected Nuclear Warhead Production, 1982 - mid 1990s

	Number planned[*]
In Production (1982)	
B61 bomb	1,000
W70 Lance (neutron bomb)	280
W76 Trident I	2,300
W78 Mk-12A reentry vehicle	543
W79 8" artillery shell (neutron bomb)	680
W80 Air-launched cruise missile	4,268
sub total	9,071[†]
Planned (1982-1987)	
W80 Sea-launched cruise missile	460
W81 Standard 2ER	350
W82 155mm artillery shell	3,500
B83 bomb	2,500
W84 Ground-launched cruise missile	560
W85 Pershing II	300
W87 MX Warhead	2,400
sub total	10,070[†]
Future Systems (late 1980s-1990s)	
Anti-submarine warfare warhead	1,250
Low-altitude air defense system	500
Lethal neutralization system	1,200
Corps Support Weapon System	500
Advanced tactical air delivered weapon	2,500
Tactical air-to-surface munition	1,500
Advanced cruise missile technology	3,000
sub total	10,450
Alternate Systems[**]	
MARV	7,500
Submarine-launched ballistic missile	
sub total	7,500
Total warhead production	**37,091**

[*] Information derived from *Nuclear Weapons Data Book* (forthcoming) and authors' estimates. Number planned is in addition to those weapons already in the stockpile.

[†] Not all of these warheads will be produced in the 1980s.

[**] Competing warhead programs for Trident SLBM upgrade and Trident II.

of 32,000 set in 1967, current nuclear warhead designs demand unprecedented amounts of plutonium and tritium.

Over the past ten years, most of the materials going into new warheads came out of the materials from retired weapons. In the future, however, the plutonium and tritium supply from old weapons will be insufficient and new plutonium and tritium will have to be produced in government reactors.[8]

The initiatives already undertaken by the Department of Energy to increase the supply of plutonium and tritium are acknowledged to be sufficient for the specific, near term warhead requirements of the present Stockpile Memorandum.[9] These initiatives will, in fact, more than double the rate of plutonium production. (See page 7 for a detailed description of DOE programs.) But the increases in the capacity of the production complex that have been taken to accommodate nuclear weapons planners are still claimed as insufficient. As a result, DOE is considering a number of options to expand materials production even further. The additional options to increase the supply of nuclear materials are designed to accommodate long-range[10] warhead production contingencies and to build a reserve of nuclear materials. These options are supported by the belief that future requirements should not be constrained by the technological capacity of the materials and production complex.

Materials Gap

Long-range production and materials requirements, based upon gross projections, have created a materials "gap" in the 1990s. This gap is a vivid reminder of the fact that among the impulses behind a never ending arms race are the "shortages" which can always be manufactured by the planning process.

The plans of the late 1980s and early 1990s which project such a gap are for an accelerated generational replacement of strategic systems, including the MX missile, Trident II, and a new cruise missile. In addition, new warhead designs and innovations are deemed to be necessary and their development and deployment are assumed. It can be argued that some of the new warheads do not represent additional military capabilities. The military requirements for neutron bombs over fission weapons, for higher yield small MX warheads, or for enhanced radiation and directed energy antiballistic missile warheads have been questioned both technically and politically, and they are only "exotic" new ways of doing old things.

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Table III

NUCLEAR WEAPONS RESEARCH AND DEVELOPMENT PROGRAMS

Warhead Program	Status*	First Deployment	Number Planned	Weapon Application
W80 Sea-Launched Cruise Missile	Phase 3	1984	460	*New Weapon*
W81 Standard Missile 2 (Extended Range)	Phase 3	1984	350	*Replacing W45 and for AEGIS Shipboard Air Defense Systems*
W82 155 mm Artillery Projectile	Phase 3	1984	3,500	*Replacing W48*
B83 Modern Strategic Bomb	Phase 3/4	1983	2,500	*Replacing B28 and B43*
W84 Ground-Launched Cruise Missile	Phase 3/4	1983	560	*New Weapon*
W85 Pershing II Missile	Phase 3/4	1983	300	*Replacing W50*
W87 MX Warhead	Phase 3	1986	2,400	*Warhead for MX/Advanced Ballistic Reentry Vehicle (ABRV)*
Anti-Submarine Warfare Warhead	Phase 2	late 1980s	1,250	*Replacing W55 and W44 in new ASW standoff weapon*
Maneuvering Reentry Vehicle (MARV)	Phase 2	late 1980s	(7,500)†	*for MK-500 Navy "Evader" Warhead, Option to replace W68 and W76*
Low-Altitude Air Defense System (Loads)	Phase 2	1985	500	*New Weapon*
Lethal Neutralization System	Phase 2	late 1980s	1,200	*Air-to-Air Missile Warhead, formerly called ASLAM, replacing W69*
Corps Support Weapons System	Phase 1	1988	500	*Replacing W70*
Advanced Tactical Air Delivered Weapon	Phase 1	1990	2,500	*New Multi-Purpose Guided Tactical Bomb*
Submarine Launched Ballistic Missile Warhead	Phase 1	1989	(7,500)†	*Replacing W76 or for Trident III Advanced Ballistic Reentry Vehicle*
Tactical Air-To-Surface Munition Warhead (TASM)	Phase 1	early 1990s	1,500	*New Weapon*
Advanced Cruise Missile Technology Warhead	Phase 1	early 1990s	3,000	*Replacing W80*

Source: Derived from the *Nuclear Weapons Data Book* (forthcoming)
*Status in FY 1982 Phases refer to stage development. Phase 1: weapons conception. Phase 2: program study and feasibility. Phase 3: development engineering and full scale development. Phase 4: initial production
†alternative warhead programs competing for SLBM programs

From page 6

The supposed materials gap prior to when a new production reactor comes on-line is thus, for the most part, falsely manufactured. The projection of a shortfall of materials is based upon a set of inflated contingencies and exaggerated requirements. Beyond the current planning period, the projected acceleration in new weapons production could indeed create an artificial shortage of nuclear materials. But after an expensive and extensive undertaking to upgrade the materials production complex, the argument that there is still a pressing need for further expansion should be closely examined. The planning gap provides the impetus to justify a further $6-10 billion factory upgrade, even though the capabilities warhead production are already adequate for any but the wildest dreams of nuclear weapons planners.

The bottom line is that the need for nuclear materials and weapons should not be determined by the weapons designers. The "plans" for new weapons should be inextricably linked to overall military policy and plans. If a huge nuclear build-up is thus the plan for the next decade, it should be the subject of an intense public assessment and debate.

Footnotes from The U.S. Nuclear Stockpile

[1] The stockpile commonly refers to all nuclear warheads within Department of Defense and Energy custody, although it officially excludes warheads under development or in production, or those awaiting to be dismantled.

[2] These numbers are based upon estimates derived from various graphs of stockpile size as averaged in Figure I.

[3] As indicated by Megatonnage, the stockpile has actually decreased to one-third of its explosive size over the last two decades.

[4] This figure is derived from an estimate of those warheads which will actually be produced in the 1980s, and includes some warheads listed under "Future Systems" in Table II.

[5] Robert L. Morgan, Acting Assistant Secretary for Defense Programs, Department of Energy, in testimony before the House Appropriations Subcommittee on Energy and Water Development, March 3, 1981 (Energy and Water Development Appropriations Hearings for Fiscal Year 1982, Part 7, p. 100).

[6] Robert L. Morgan, op. cit., p. 100.

[7] Major General W. W. Hoover, Director, Office of Military Applications, DOE, in testimony before the House Armed Services Subcommittee on Procurement and Military Systems, March 4, 1981 (Hearings on Military Posture, Fiscal Year 1982, HASC No. 97-2, p. 55).

[8] The current supply of materials is estimated to be 80 ± 15 metric tons of plutonium, 500-700 metric tons of highly-enriched uranium, and 60 ± 10 kilograms of tritium.

[9] The long-range requirements are projected to 15 years in the Stockpile Memorandum and through the year 2000 in special studies conducted on future materials needs.

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MP (3/12/82)

STATEMENT BY LOUIS O. GIUFFRIDA
DIRECTOR, FEDERAL EMERGENCY MANAGEMENT AGENCY
BEFORE THE
SUBCOMMITTEE ON STRATEGIC AND THEATER NUCLEAR FORCES
COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE
MARCH 17, 1982
FISCAL YEAR 1983 CIVIL DEFENSE PROGRAM

Mr. Chairman, thank you for this opportunity to appear before you to discuss our Nation's Civil Defense. In this statement I shall present this Administration's request for the Civil Defense Program for FY 1983.

I want to emphasize at the outset that this is the President's Civil Defense program. President Reagan wants this program. It is an important element of his overall effort to reduce the likelihood of nuclear war.

The Civil Defense Program we are requesting is designed to accomplish several things:

It is designed to save American lives in the event of a nuclear attack by dispersing people into rural areas where they will be affected less by the blast and thermal effects of the nuclear explosions, leaving radiation as the major hazard for the dispersed population. Our goal is to double the number of Americans that would survive from a major Soviet attack on the United States.

It is designed to make nuclear war less likely by improving our ability to deter the Soviet Union from an attack on the United States. In conjunction with our strategic forces, Civil Defense will help contribute to a strong deterrent posture. It also reduces the ability of the Soviets to coerce the United States with nuclear blackmail.

It is designed also to provide an improved capability for States and localities to deal with the day-to-day emergencies that occur as a result of natural and technological hazards.

It is designed to build on capabilities already in existence, such as local police, fire, and emergency medical services organizations.

Finally, it is designed to be an integral part of President Reagan's overall program to improve the national security of the United States. The program will be compatible with and supportive of programs to provide for continuity of government and emergency communications in the event of a nuclear attack.

This Administration proposes to take action in a moderate, orderly, responsible and inexpensive way to implement a complete population protection program by the end of FY 1989. We plan to progress steadily until all plans and preparedness are finished. We will at the same time improve the quality of the plans which have already been developed. Once the program is in place, we will maintain the plans and systems in good working order.

Our FY 1983 request outlines the major elements of an enhanced 7-year civil defense program for the Nation. This enhanced program is a composite of initiation of new activities, completion of current activities, and improvement of all activities. These are pulled together into a coherent whole and are given impetus by a Presidential commitment to save lives in the event of nuclear attack or other emergencies. Program emphasis initially is on people, plans, and communications. When these are in place, we will procure the equipment needed to complete the program. The remainder of my statement is an explanation of this program and the funds requested to support it in FY 1983.

FY 1983 CIVIL DEFENSE PROGRAM

Table 1 summarizes our Civil Defense Program for FY 1983.

TABLE 1: FY 1983 CIVIL DEFENSE PROGRAM REQUEST
(Budget Authority in $ Millions)

Appropriation and Program	Actual FY 81	Program FY 82	Request FY 83
State and Local Assistance Appropriation.	59.2	79.7	156.3
State and Local Assistance.	40.1	50.0	66.3
Radiological Defense.	6.2	9.0	29.0
Nuclear Attack Civil Preparedness	9.2	11.6	46.2
Emergency Operating Centers	2.8	6.5	14.9
Communications and Warning.	.9	2.6	---
Emergency Planning Assistance Appropriation	24.7	29.2	63.8
Research.	7.8	8.7	22.0
Training and Education.	9.6	10.2	16.5
Telecommunications and Warning.	7.3	10.3	25.3
Salaries and Expenses Appropriation	23.0	24.4	32.2
TOTAL CIVIL DEFENSE PROGRAM CATEGORY.	106.9	133.3	252.3*

*Detail may not add due to rounding.

Table 2 shows selected Civil Defense Program outputs for the period FY 1981 through FY 1983.

TABLE 2: SELECTED CIVIL DEFENSE PROGRAM OUTPUTS

	FY 81	FY 82	FY 83
Crisis Relocation Plans	790	1,200	1,700
Host Area Shelters Identified (000)	941	1,130	1,530
Radiological Defense Support Systems	200	400	752
Training Exercises for Local Officials	200	253	948

We are requesting that the limitation on expenditures for Emergency Management Assistance in the last proviso of Section 408 of the Federal Civil Defense Act be raised from $47 million to $50 million to cover the amount requested in the FY 1983 budget.

4

THE CONCEPT FOR POPULATION PROTECTION

The primary purpose of the Civil Defense Program is to save American lives if there should be a nuclear attack on the United States.

We do not know if there will be a nuclear attack on the United States, and we hope there never is such an attack. However, nuclear weapons do exist. The Soviet Union has nuclear weapons capable of attacking the United States. Other nations also have nuclear weapons. As long as this capability does exist, it is prudent to take some reasonable precautions against the possibility of a nuclear attack. It is better to take some precautions and not have to use them, than to need the precautions and not have them.

The Civil Defense Program for the United States is designed to be implemented upon warning of a nuclear attack. If the world situation should deteriorate, if there should be conventional fighting, if nuclear weapons should be used elsewhere in the world, the danger of a nuclear attack on the United States would increase. As the perceived level of danger increased, the people of the United States would insist on taking measures for their own survival. It is the function of the Civil Defense Program to establish in peacetime the trained personnel, the equipment, and the plans and procedures to assure that this crisis surge effort by the people is well managed and is as orderly as possible given the conditions of an imminent attack.

Our plans are designed to be implemented given some warning of an impending nuclear attack. If there is no warning, the value of our plans and systems will be decreased. We believe that there will be sufficient warning to allow the people to take the preplanned emergency actions that we have in our program. Even if we have as little as three hours warning, our program will save lives. If we have a week's warning, our program will be of significant benefit.

The thought of a nuclear attack is repugnant to our citizens, and it is difficult to sustain prolonged broad support for a civil defense program. For this reason, our concept does not demand active participation from the American people in the Civil Defense Program until there is a need--that is, until there is warning of an impending attack. We will concentrate on putting into place the programs needed to organize and control the emergency actions by the people when they themselves will feel the need.

There are five essential elements of population protection:

1. The Civil Defense Management Structure
2. Nuclear Attack Civil Preparedness Planning
3. Communications and Warning
4. Emergency Instructions for the Public
5. Radiological Defense

The Civil Defense Management Structure consists of over two million trained emergency managers and related emergency responders, almost all of whom currently are local employees. The State and local structure, along with a relatively small group of Federal personnel to provide overall policy guidance and program coordination, is responsible for the operation of the civil defense program. Trained emergency managers are the local and State civil defense officers, emergency management personnel, and other governmental officials who are responsible for dealing with both peacetime and wartime emergencies in their communities. It is the job of these emergency managers to plan in peacetime and to manage in wartime the Civil Defense activities at their level. The existing force of trained emergency responders--police, firefighters, emergency medical personnel, and others who work on a day-to-day basis responding to peacetime emergencies--also will be at the front lines in an attack emergency to organize and guide the actions of the people. These full-time personnel will be augmented by volunteers.

Nuclear Attack Civil Preparedness Planning is designed to give Americans a chance to survive an attack. The most effective thing we can do to protect the population is to relocate people from risk areas to host areas. Risk areas are locations which we assume would likely be targets. Risk areas are areas near military bases or key industrial facilities, or are cities over 50,000 in population. Host areas are small cities and towns and rural areas. We will have fewer casualties when our people are dispersed into rural areas, regardless of the size and composition of an attack. In order to accomplish relocation, we need plans for the orderly evacuation of the risk areas, plans for reception and care of the relocated people into the host areas, plans for distribution of food and other essential supplies to the relocated population, and fallout shelters. Our approach to fallout shelters is to survey existing structures in the Nation that either now provide adequate protection against fallout or can be upgraded in an expedient manner given some warning. Our goal is to provide access to fallout protection for each American in case of need.

Communications and Warning is essential to allow the people to take maximum advantage of warning time. Communications and warning contains three basic elements. The National Warning System (NAWAS), is designed to inform Federal, State, and local governmental agencies and their emergency managers of an impending attack. These officials warn the citizens of an attack, the system provides for almost simultaneous warning throughout the Nation. The Emergency Broaucast System (EBS) allows the President, Governors, and other governmental officials to communicate with the people using existing broadcast stations. The Emergency Broadcast System is the primary way we plan to transmit emergency instructions to the people during the warning period. The Direction, Control and Warning System allows emergency managers to send information up and instructions and guidance down to provide for orderly management of emergency actions across the Nation. The system will provide communications linkages between and among the Federal Government, the States, and areas and localities within the States.

Emergency Instructions for the Public are prepared in advance to be acted upon when needed. The American people will want to do something if there is warning of an attack. Emergency Instructions are prepared to help assure that the public responds effectively in an emergency situation. This material is prepared in advance to be available immediately through the local emergency management structure upon the determination that conditions are such as to enter into the implementation of crisis relocation and other protective measures. Among the techniques employed is the publication of instructions in local telephone directories which are readily available to all.

Radiological Defense is designed to provide the public and emergency services personnel with a means of measuring the intensity of radiation caused by a nuclear attack and is an essential support system for nuclear civil protection and direction and control functions. Radiation is a unique and particularly frightening feature of a nuclear explosion since it can be neither seen nor felt. In order for the people in a fallout shelter to measure how well they are protected and to determine when they can emerge from their shelters after the attack, they must have a means of measuring the intensity of residual radiation. The Radiological Defense program will produce and deploy to localities the instruments and instructions to provide that capability.

The Civil Defense Program cannot provide absolute assurance to any individual that he or she will survive a nuclear attack. However, it can provide for each American a higher chance of survival than if there were no plans, no procedures, no equipment, or no emergency instructions. Once the plans and procedures, equipment, and instructions are completed for the entire Nation, and providing the people follow the emergency instructions in the warning period, the Civil Defense program we propose will undoubtedly improve the probability of survival in the event of nuclear attack.

The Civil Defense Program is funded from three Appropriations: State and Local Assistance; Emergency Planning and Assistance; and Salaries and Expenses. Included within the three appropriations are eight programs which, taken together, comprise the active Civil Defense Program.

State and Local Assistance Appropriation

The portion of this appropriation which applies to Civil Defense includes four programs: State and Local Assistance; Radiological Defense; Nuclear Attack Civil Preparedness; and Emergency Operating Centers. Much of this money passes through to State and local governments. Some funding is required to be matched by State and local monies, and some monies are used to purchase equipment which is then granted to State and local governments.

State and Local Assistance Program

The purpose of the State and Local Assistance Program is to create an infrastructure of Civil Defense personnel, equipment, and facilities at the State and local level. Table 3 below shows the breakout of funding requested for the State and Local Assistance Program:

Table 3. State and Local Assistance Program*
(Budget Authority in $ million)

Program Element	Actual FY 81	Program FY 82	Request FY 83
Emergency Management Assistance	36.9	43.9	50.0
Maintenance and Services	1.4	2.3	7.0
Supporting Materials	1.5	3.5	9.0
Supporting Activities	0.3	0.3	0.4
Total	40.1	50.0	66.3

*Detail may not add to totals due to rounding.

Emergency Management Assistance provides up to 50% matching funds to support eligible State and local emergency management agencies. Federal funds may be used for salaries, travel expense, and other day-to-day operating expenses of these agencies.

State and local agencies provide the essential infrastructure of trained personnel to plan in peacetime and to operate in an emergency the entire response and recovery mechanism upon which program execution depends. The program goal is to have about 8,200 trained emergency managers at the State and local level by the end of FY 1987.

Maintenance and Services is designed to match State and local government resources to support the recurring and maintenance costs of existing emergency communications and warning systems and emergency operating centers. FY 1982 funds provided for this program were distributed to State and local governments on a formula basis under Section 205 of the Federal Civil Defense Act of 1950 as amended; this provided for a population based distribution. For 1983 this program will be administered under Section 201(1) of the Act to allow for allocations based on the expressed needs of the State and local governments. In the past, the funding level of this program has been inadequate to meet the need. Starting in FY 1982, we included costs for replacement of EOC equipment and repair and maintenance of EOCs in this program rather than in the EOC program itself. We expect the FY 1982 funding level of about $2.3 million to fall short of the need, as in the past. However, the increase to about $7.0 million for this program, which is requested for FY 1983, should provide adequate funding to meet the need, including the added EOC repair and replacement initiatives.

Supporting Materials provides matching funds to States and localities to improve their local emergency communications and warning system capabilities.

Emergency power generators and protection against the electromagnetic pulse effects of nuclear explosions are funded in this program. The FY 1983 program is designed to support establishment of an emergency radio network within each State. Funds to upgrade the survivability and reliability of State radio networks are included in the program as are funds to establish a warning system to alert the general public of an impending attack.

Supporting Activities provides for an improved damage assessment capability at the State and local level and for a close working relationship with the American Red Cross. Damage assessment is used in the period after a nuclear attack to determine the appropriate actions to be taken to speed up the recovery process. This program will fund in FY 1983 an evaluation of the damage estimation process to develop such a capability on a decentralized basis to localities. The contractual arrangement with the American Red Cross provides for a Red Cross representative at each FEMA Regional Office. The Red Cross provides valuable expertise in the development of plans and procedures for management of congregate care facilities in major emergencies. The Red Cross also provides liaison with all community-based organizations.

Radiological Defense Program

The Radiological Defense Program provides radiation measuring instruments, trained operators (Radiological Defense Officers), support and maintenance facilities, and training material. In FY 1983, we propose to add 202 full-time trained Radiological Defense Officers (RDOs), for a total of 254 fully funded officers at the end of the fiscal year. These constitute a core group which is expected to be supplemented ultimately by more than 20,000 part-time or volunteer radiological specialists. This will provide adequate coverage at the State level. We will continue to maintain the 237,000 sets of instruments deployed in the early 1960's. We will produce a pilot run of 50,000 shelter sets, which will include new, low-cost instruments estimated to cost about one-fifth of the price of the 1960's instruments when full production is achieved. The FY 1983 pilot production will provide the basis for future quantity procurement of these low-cost instruments. There are two kinds of radiological defense sets. Shelter Sets include one ratemeter, two dosimeters, and one charger; these are intended for use in fallout shelters and for post-attack recovery operations. Operational Instrument Sets include two ratemeters, six dosimeters, and a charger; these are for use by emergency responders. We plan to expand the number of RADEF support systems to provide an improved capability to store and maintain the instruments to be deployed to the localities in the future.

Table 4 below shows the funding and some of the planned outputs of the Radiological Defense Program:

Table 4. Radiological Defense Program

	Actual FY 81	Program FY 82	Request FY 83	
Funding (BA in $ Millions):	6.2	9.0	29.0	
Outputs:				Goal
State Level RDOs	16	52	254	254
RADEF Support Systems	200	400	752	5,600
Operational Instrument Sets (000)	237	237	237	400
Shelter Sets (000)	--	--	50	7,000

Nuclear Attack Civil Preparedness Program

The Nuclear Attack Civil Preparedness Program produces basic plans which the public would execute in the event of warning of a nuclear attack. It includes the planning for relocation during a crisis; the identification and preparation of fallout shelters; and emergency instructions for the public.

Nuclear Civil Protection Planning provides for the development and maintenance of State and local plans to relocate people in high risk areas to host areas with lower risk in the event of warning of an impending nuclear attack. It also provides plans for use of best available fallout and blast shelters by persons in risk areas if there is insufficient warning to use the relocation plans. Crisis relocation planning is the fundamental ingredient of the Civil Defense Program. The risk areas from which the population moves and the host areas which receive the relocated people must work together. Plans for orderly movement, reception, and provision of food and other essentials must be carefully worked out in advance and kept current. Only about 26% of the population presently is covered by crisis relocation plans, and some of the existing plans are out-of-date. We intend to proceed systematically until there are good crisis relocation plans for each locality in the United States.

Fallout Shelter Preparation involves several related activities. It is necessary first to locate buildings which are suitable for shelters or can be improved in a relatively short time to provide fallout protection. It is necessary to examine each shelter carefully and to prepare a specific plan to use it and/or to upgrade its fallout protection. Many potential shelters, such as basements of public buildings, can be improved by expedient construction methods using locally available materials. However, a plan must be prepared for each shelter. Shelters already providing adequate protection need to be marked. Finally, shelters need some equipment to be of use. Essential shelter stocks include ventilation kits, water containers, and sanitation kits. Our general approach to this program is to complete the survey of host area shelters in FY 1984, then do the shelter upgrade planning, and finally, to procure and distribute shelter stocks. Later procurement of the shelter stocks will allow economies of scale in the procurement and ease problems of maintenance until personnel have been hired and trained and the plans completed and approved. Our goal is to have sufficient fallout shelters planned so that every American would have access to one in an emergency.

Emergency Instructions for the Public is a program element designed to produce and make available in advance information which the public requires to relocate to shelter in time of crisis or to take shelter in place when little or no warning is given. Much of this information will be placed in telephone directories. In FY 1983, we want to add this information to telephone directories covering about 38 million Americans. Individual citizens will be able to read the written instructions provided and to follow them to assure that their relocation, preparation of fallout shelters, stay in the shelters, and emergence into the post-attack environment can be accomplished as safely as possible under the conditions. Knowing what to do may make the difference between life or death.

Individual Mobilization Augmentees are military reservists who augment Federal, State, and local CD activities upon mobilization. The FY 83 program includes funds for the training and travel of 1,200 of these IMAs.

Industrial Protection Planning provides for the identification of essential industries and key workers in risk areas who would need blast shelters to allow them to continue work if the rest of the population were relocated to host areas. The FY 83 program includes money to explore the feasibility of such an approach and to construct some prototype blast shelters in an effort to determine better the costs and optimum construction approaches. In addition, there will be considerable research and analysis performed in FY 83 to determine the feasibility and advisability of an extensive program to provide for industrial protection.

Table 5 shows the funding for the Nuclear Civil Preparedness Program and some selected program outputs.

Table 5. Nuclear Attack Civil Preparedness Program

Funding (BA in $ Millions)*	Actual FY81	Program FY82	Request FY83	
Nuclear Civil Protection Planning	5.5	8.1	14.3	
Shelter Preparation	2.0	3.6	15.9	
Emergency Instructions for the Public	-	-	2.2	
Individual Mobilization Augmentees (IMAs)	1.7	1.7 1/	1.8	
Industrial Protection Planning	-	-	12.0	
Total	9.2	11.6	46.2	
Outputs				Goal
Crisis Relocation Planners	200	205	485	
Crisis Relocation Plans	790	1200	1700	3040
Host Area Shelters Identified (000s)	941	1130	1530	1611
Shelters Marked (000s)2/	97	87	103	345
Shelter Upgrade Plans	0	0	4	3040

*NOTE: Detail may not add to totals due to rounding.

1/ Funded by the Department of Defense in FY 82.

2/ Shelter marking was discontinued in 1974; it is estimated that 10% of existing signs deteriorate and have been removed each year.

Emergency Operating Centers Program

This program provides Federal technical and operational guidance and financial assistance to State and local governments for Emergency Operating Centers (EOCs). EOCs are command posts for emergency managers. We provide 50% matching funds for the design and upgrading to include protective features of new and existing facilities. This includes communications, emergency power, and protection against electromagnetic pulse effects.

The goal is an effective, reliable, and survivable direction and control capability at the State and local level. We need to upgrade the EOCs to accomplish this.

In FY 1983 we propose to spend about $15 million in matching funds toward achieving full operational capability for those applicants whose projects are approved. This is about twice the amount for FY 1982. We will allocate these funds on a priority basis, giving consideration to the significance of each project for improving our crisis relocation capability in host areas. Our FY 1983 proposal addresses only about 5% of the deficiencies in these EOCs. FEMA has State and local requests for FY 1983 which approximate a $35 million Federal share. These estimates represent a clear indication of State and local commitment to participate in this program.

Emergency Planning and Assistance Appropriation

The Civil Defense portion of the Emergency Planning and Assistance Appropriation provides for three important Civil Defense Programs: Research, Training and Education; and Telecommunications and Warning.

Civil Defense Research Program

The Civil Defense Research Program provides the scientific, analytical, and technical basis for the entire Civil Defense Program. It is necessary to assure that the basic facts and relationships upon which rest the plans, policies, procedures, and procurement for civil defense are sound, well documented, and thought through properly and objectively. Defense against a nuclear attack must be accomplished with little empirical evidence upon which to base conclusions. Only two nuclear weapons have been exploded in war, and the results of weapons tests provide only a partial basis for dealing with all of the other aspects of nuclear war. A good research program, therefore, must in this instance substitute for experience which we cannot gain by experimentation.

We divide the research program into three elements: Research; Systems Integration; and Systems Development.

The Research Program Element provides for development and analysis of concepts, approaches, and techniques. The idea is to introduce new knowledge into the Civil Defense Program and to find new relationships among old knowledge. Some of the subjects included in this program element are consideration of alternative post-attack recovery strategies, methods for industrial protection, and improved methods of blast shelter construction. Also included are continued work on weapons effects, fallout prediction, and the nature of a possible nuclear attack.

Systems Integration focuses on making best use of Civil Defense resources across the entire spectrum of emergencies. This means improving current operational readiness for the nuclear attack emergency while at the same time responding to day-to-day emergencies caused by natural and technological hazards. This is a new program element for FY 1983.

Systems Development is the production or revision of operational guidance which is furnished to emergency managers at State and local levels for their use in developing their own Civil Defense Programs. The products of Systems Development are manuals and handbooks, demonstrations, and field tests of the various programs. Systems Development projects are based on previous research and on field experience; they provide a link between research and the operational programs. Table 6. shows the funding for the Civil Defense Research program:

Table 6. Civil Defense Research Program Funding
(Budget Authority in $ Millions)

Program Element	Actual FY 81	Program FY 82	Request FY 83
Research	5.0	5.8	18.1
Systems Integration	-	-	.8
Systems Development	2.8	2.9	3.1
Total	7.8	8.7	22.0

Civil Defense Training and Education Program

This program prepares Federal, State and local officials, their staffs, and the public to meet the responsibilities and challenges of Civil Defense. The training and education program is divided into three program elements: Civil Preparedness Training; the National Emergency Training Center; and Emergency Public Information.

Civil Preparedness Training is aimed at providing instruction to Civil Defense personnel at all levels. The training courses cover the entire range of Civil Defense programs and are to be given to such audiences as: State and local elected officials; emergency managers and planners; emergency services personnel; radiological defense officers; shelter managers; and private citizens who are involved in the Civil Defense program. Delivery of the training is accomplished in three ways. Certain specialized courses are taught to a limited number of personnel at the National Emergency Training Center (NETC) at Emmitsburg, Maryland. Some personnel receive instruction on a regional basis. A large number of personnel receive their training though their own State and local emergency management staffs. In the latter case, the role of FEMA is to train the trainers. Providing training and the related instructional material for potential instructors increases many fold the number of people that can be reached with this training.

The National Emergency Training Center program element reflects the resources required for the faculty and administration components of this important educational facility.

Emergency Public Information is a new program element in FY 1983. The intent of this program element is to provide materials for acquainting the public with the Civil Defense program in peacetime, but particularly during a period of tension in which the probability of a nuclear attack is increased without an actual attack warning.

Table 7. below reflects the funding and selected outputs for the Training and Education Program.

Table 7. Civil Defense Training and Education Program
(Budget Authority in $ Millions)

	Actual FY 81	Program FY 82	Request FY 83	Goals
Funding	9.6	10.2	16.5	
Outputs (Cumulative trained personnel)				
Shelter Manager Officer/Instructors (000s)	0	0	1.5	20.0
Radiological Defense Officers (000s)	7.1	8.3	9.1	22.0
Radiological Instructors (000s)	4.5	5.0	5.5	7.5
Radiological Monitors (000s)	178.0	179.0	187.0	625.0
Exercises for Local Officials (Annually)	200	253	948	3040

Telecommunications and Warning Program

There are three primary elements of the Civil Defense Telecommunications and Warning Program: the National Warning System (NAWAS); the Emergency Broadcast System; and the Federal Direction and Control System. The NAWAS system and the Federal Direction and Control System are dependent on commercial telephone lines. Many of the State and local emergency communications and warning systems also are dependent on commercial telephone lines. Although the existing communications and warning system works well in peacetime, it is vulnerable to the effects of a nuclear attack and would not be useful during or after an attack.

Our efforts in the Telecommunications and Warning Program for the next several years will be to replace the old system with a new one which will survive a nuclear attack and provide an operational capability throughout the emergency. A nuclear attack could disrupt communications. In this event, the ability of government at all levels to communicate with other governmental activities and with the public would be degraded severely. Lack of ability to warn and to communicate could cripple our efforts to manage response and recovery activities.

We plan to create a more survivable telecommunications and warning system by using radio as the primary means of communications. High-frequency radios protected against the electromagnetic pulse effect of nuclear weapons and provided with an independent source of electrical power have the capability to operate during and after an attack, provided they are not hit directly by a nuclear weapon. This continuous communications capability is an essential feature of the Civil Defense Program.

As we perform the research and planning necessary to put into place a new system based on radio, we will continue to operate the existing system. Much of the equipment used in the current system will continue to be useful in the new system.

FEMA is responsible for providing a link from the FEMA Regions to the States. We plan to provide each State with high-frequency radio capability in FY 84 and FY 85. We also will provide State and local governments with technical assistance and policy guidance. In addition, FEMA provides financial and technical assistance to commercial broadcast stations which participate in the Emergency Broadcast System; the financial support is for the purchase and installation of emergency power and for protection against the effects of a nuclear weapon, such as electromagnetic pulse and fallout.

Introduction and extensive use of high-frequency radio is the first step in the overall improvement program. As equipment and funds become available, we will introduce satellite communications, low-frequency radio, and meteor burst technology to provide an element of redundancy in the system. The use of more than one form of radio communications will improve the reliability of the overall system in emergencies.

Table 8 below shows the funding for the three major elements of the Telecommunications and Warning Program:

Table 8. Telecommunications and Warning Program Funding*
(Budget Authority in $ Millions)

Program Element	Actual FY81	Program FY82	Request FY83
National Warning System 1/	4.6	6.3	7.1
Emergency Broadcast System 2/	(.9)	(2.6)	8.1
Direction and Control System	2.6	3.9	8.3
T&W Planning and Analysis	-	0.3	1.7
Total	7.3	10.3	25.3

*Detail may not add to totals due to rounding

1/ Includes the Washington Area Warning System and the Decision Information Distribution System.

2/ Funding for EBS was included in the State and Local Assistance Program for FY 81 and FY 82; memo entries are shown for comparison purposes.

Salaries and Expenses Appropriation

The Civil Defense portion of the Salaries and Expenses Appropriation pays for employees of FEMA who work in the Civil Defense Program. Most of these are full-time employees, but a relatively small number of part-timers, consultants, and experts also will be used as appropriate. Table 9 below shows the proposed staffing for the Civil Defense program:

Table 9. Civil Defense Personnel in FEMA

	Actual FY 81	Program FY82	Request FY83
Permanent Positions	610	582	687
FEMA Headquarters	(181)	(177)	(204)
FEMA Regions	(429)	(405) 1/	(483) 1/

1/ Additional part-time personnel to conduct the Shelter Survey Program are funded in the State and Local Assistance Appropriation; this amounts to 60 work-years in FY 1982 and 95 work-years in FY 1983.

Peacetime Use of Civil Defense

Beyond its role in deterrence of war and protection of the population in case of attack, civil defense has benefits for our people on a day-to-day basis. Civil defense improves the ability of State and local governments to deal with the tornadoes, hurricanes, floods, technological accidents, and other peacetime emergencies which occur all too often. The civil defense program approved by the President will improve our ability to protect life and property in peacetime emergencies. Exercising Civil Defense systems on frequent, day-to-day basis for peacetime emergencies will improve the capability of the systems to respond to nuclear attack.

FEMA is building a single system to respond to the full spectrum of emergencies from peacetime disasters to a nuclear attack. At the local level there is one set of emergency management resources. There is one police force, one fire department, one government, and one group of physicians, hospitals, news media, and construction contractors. Resources which respond to a tornado or an earthquake also would respond in an attack-related emergency.

The utility of civil defense plans and systems for peacetime emergencies has been demonstrated repeatedly. Trained personnel with radiological instruments have responded to incidents involving radioactive materials. Crisis relocation plans have been used when hurricane threats required evacuation of coastal areas. Warning systems have alerted people to tornadoes. Emergency broadcast system stations have been used by local officials to transmit emergency information to the public. Table 10 shows our estimate of the utility of the civil defense program for emergencies other than a nuclear attack.

Table 10: Peacetime Utility of Civil Defense Programs

Selected Civil Defense Programs	Natural Disasters 1/	Technological Disasters 2/	Nuclear Accident 3/	Terrorist Incident 4/
State and Local CD Staffs	Essential	Essential	Essential	Essential
Radiological Defense	None	Limited 5/	Essential	None
Crisis Relocation Plans	Moderate 6/	Moderate	Essential	Moderate
Fallout Sheltering Plans	None	None	Substantial	None
Fallout Shelter Stocks	Low	Low	Low	Low
Research	Moderate	Moderate	Moderate	Moderate
Emergency Operating Centers	Essential	Essential	Essential	Essential
National Warning System	Substantial	Substantial	Substantial	Substantial
Emergency Broadcast System	Essential	Essential	Essential	Essential
Training and Exercises	Essential	Essential	Essential	Essential

1/ Includes hurricane, tornadoes, floods, earthquakes.
2/ Includes hazardous materials spills, fires, and dam failures.
3/ Includes both accidents and terrorist incidents involving nuclear plans or weapons.
4/ Excludes nuclear terrorist incidents.
5/ Radiation meters are useful in spills involving radioactive materials.
6/ Substantial value in earthquake and hurricanes.

The Outlook for Civil Defense

The outlook for Civil Defense is good. Government leaders at all levels whose responsibility it is to provide for the common defense know that Civil Defense is essential in this age of uncertainty. This Administration is embarking on a complete, but reasonable, Civil Defense program to protect the population of the United States against the possibility of a nuclear attack. We are asking this year and will ask in future years for sufficient money to do the job for the entire Nation. Although previous Administrations have talked about Civil Defense, and some have even advocated Civil Defense, none have applied the necessary money and effort. President Reagan means to get the job done.

We are providing new life to a program which has been in a caretaker status for a number of years. Funding in recent years has been level or declining in real purchasing power and has been sufficient only to keep the program barely going. Many of the previous plans and preparations have become outdated. We know that. We are ready and willing to correct the mistakes and omissions of the past. Since January of 1981 we have been working hard to improve our understanding of how to provide Civil Defense and how to formulate a useful program.

We believe we have developed a workable program which can be accomplished through incremental increases in funding. During FY 1982, we are concentrating on preparing the foundation for future expansion with a budget inherited from the previous Administration. Our goal in FY 1983 is to increase dramatically our ability to plan and improve civil defense plans and procedures at the State and local level. We shall request sufficient funding in Fiscal Years 1984 through 1989 to complete the task of putting into place a Civil Defense

Program for population protection which covers all of the United States. Thereafter, the Nation can concentrate on maintaining and updating the system which will have been put into place.

Our strategy in bringing this Civil Defense program to completion is to concentrate first on people and later on things. We want to emphasize early achievement of a large, competent, and well trained staff of CD workers at the Federal, State and local level. We will stress the completion of plans and support systems for crisis relocation. We want to finish the task of locating and preparing plans for expedient upgrading of fallout shelters. When we have the people and the plans in place, we will undertake the procurement of the supplies and equipment necessary to finish the job. We want to make certain that we have at all times a program which could provide maximum benefit if we were to have to use it before we have done everything we want to do.

Mr. Chairman, that completes my statement in support of the Civil Defense Program. I ask your approval of this program, which deserves the support of all Americans, regardless of political party or persuasion. War is an evil thing, but it has happened, is happening, and could happen again. Those who advocate an effective Civil Defense Program do not thereby approve of war or exhibit a desire for war of any kind. On the contrary, efforts to increase the Civil Defense capability of the Nation demonstrate a clear respect for the cruel realities of nuclear war and reflect a desire to mitigate its harsh consequences for mankind.

FEDERAL EMERGENCY
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BACKGROUNDER: FY 1983 CIVIL DEFENSE PROGRAM

This paper outlines the Fiscal Year 1983 civil defense program requested by the Federal Emergency Management Agency (FEMA), which is responsible for emergency-related programs spanning the full range of mitigation, preparedness, response and recovery -- in peace or war.

Revitalized Civil Defense Program

Following the Administration's review of civil defense programs and policies, President Reagan, on October 2, 1981, announced his intention to "devote greater resources to improving our civil defenses," as part of his plan "to revitalize our strategic forces and maintain America's ability to keep the peace well into the next century."

The fundamental purposes of the National Civil Defense Program are:

(1) To save American lives in the event of a nuclear attack. It will save lives by dispersing people into rural areas where they will be least affected by the blast and thermal effects of the nuclear explosions, leaving radiation as the major hazard for the dispersed population. Our goal is to double the number of Americans that would survive from a major Soviet attack on the United States.

(2) To make nuclear war less likely by improving our ability to deter the Soviet Union from an attack on the United States. In conjunction with our strategic forces, Civil Defense

-more-

can help to persuade the Soviet leadership that the ultimate outcome of an attack by them on the United States would be worse for them than for us. It also reduces the ability of the Soviets to coerce the United States during a period of international crisis.

(3) To provide an improved capability for States and localities to deal with the day-to-day emergencies that occur as a result of natural and technological hazards. These "dual-use" benefits of the civil defense program were recognized by the Congress in December 1981 amendments to the Federal Civil Defense Act.

FY 1983 Civil Defense Program

FEMA's budget for 1983 requests $252,340,000 for civil defense activities -- about $1.10 per capita. As the first year of a moderate, multi-year program intended to deploy population protection capabilities, the requested FY 1983 budget is the first step toward rebuilding reasonable protection for our people. The program will be deployed in an orderly way -- not as a crash effort -- and in full partnership with States and localities.

The thrust of the program is to protect the U.S. population by relocating (evacuating) people from larger cities and other potential risk areas over a period of several days during an acute crisis, and providing them with fallout protection and support. Capabilities will also be improved to protect people in-place (at or near their homes, schools, or places of work) should time or circumstances preclude crisis relocation.

Studies indicate that a balanced, moderate-cost civil defense program emphasizing crisis relocation might save -- in a large-scale attack preceded by strategic warning -- up to twice as many Americans as the 40 percent expected to survive under present civil defense. Such a balanced program includes both plans for crisis relocation of people from potential risk areas, and operational systems and capabilities for execution of relocation plans and for protecting the population from fallout.

Based on extensive research and on experience in peacetime evacuations, crisis relocation could be highly effective if two conditions existed: (1) completion of high quality plans, together with development of operational systems and capabilities; and (2) several days of warning time in which to

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BACKGROUNDER: FY 1983
CIVIL DEFENSE PROGRAM

Add Two

move and protect the bulk of approximately 145 million people living in our larger cities or near important military installations.

Surprise attack is considered highly unlikely. Most experts believe that an attack on the U.S. would come only in the context of a lengthy period of international crisis. Moreover, it is likely that we would have sufficient warning time because the Soviets must protect the bulk of their urban population by evacuation.

Evacuation experience in both peacetime and World War II is that most people will comply with official instructions, provided that these are understandable and make sense in terms of improving chances for survival. In fact, in a threatening situation, many people will leave potential danger areas on their own, whether or not they have been advised to do so.

The FY 1983 program will provide a basis for action, in future years, to permit full deployment of required capabilities. The FY 1983 program will accordingly accelerate activities already underway (e.g., crisis relocation planning, development of State and local Emergency Operating Centers) while, at the same time, improving the quality of plans and systems. The program will feature greater participation by State and local governments in managing the implementation and achievement of national goals and objectives. FEMA will also commence new programs in FY 1983 (e.g., survivable, high-performance warning and communications systems). The FY 1983 program also provides for analyses and pilot activities in the area of protection of key industries and related work forces.

FY 1983 Program Highlights

In the area of nuclear civil protection for the people, the FY 1983 request provides for accelerating development of crisis relocation plans. By end-FY 1983, augmented State planning staffs should have completed about 56 percent of the initial CRP's required by local jurisdictions throughout the United States. FEMA also proposes to accelerate the National Shelter Survey, which provides data needed as a basis for crisis relocation planning.

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The most important factor in effective crisis relocation is public cooperation which, in turn, depends upon the public's understanding of official advice and instructions. FEMA therefore intends to work with the States to provide additional crisis relocation maps and instructions. These instructions are intended to be placed in local telephone directories in areas where crisis relocation plans have been completed. By end-FY 1983, such instructions should be published in telephone directories in jurisdictions including about 25 percent of the total U.S. risk population.

Additional FY 1983 activities will include resumption of selective shelter marking (suspended in 1973), as well as work to provide a basis for future quantity procurement of austere shelter supplies and ventilation kits. Shelter signs identify for the citizens those buildings providing protection against nuclear attack effects, while shelter stocks permit people to remain in shelters until the decline of radiation levels permits emergence from shelter.

FEMA's FY 1983 request will improve the coverage of the existing National Warning System, while preparing for deployment of a survivable radio-warning system and of a survivable system for communications between the National, Regional, State and State-Area levels.

FEMA proposes to accelerate the program started in FY 1981 to provide matching funds for development of State and local Emergency Operating Centers. EOC's are protected sites, with necessary communications, from which key local and State officials direct coordinated operations in peacetime or attack emergencies. FEMA proposes also to accelerate the program to provide fallout and electromagnetic pulse (EMP) protection for broadcast stations, as well as an emergency power generator. Such protected stations provide a critical component of readiness, the ability to provide authoritative information and instructions to the public in an emergency. Matching funds will also be provided to enhance existing State and local networks for emergency communications.

The FY 1983 request also provides for support of professional Radiological Defense Officers at the State-Area Level, and extension of the State-level RDO structure being

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developed in FY 1982. Full-time supervisory RDO's are the keystone in developing radiological defense systems and capabilities. In addition, capabilities will be developed to produce and deploy, in future years, about 7 million sets of instruments required for the shelter and post-shelter periods.

In the area of training, the FY 1983 request restores capabilities to provide simulated-emergency exercises for local and State officials. Effective execution of plans to deal with peacetime or attack emergencies requires that key officials know what to do in case of emergency, and experience has shown that exercising is the most effective way of providing this knowledge. Other civil defense training activities will include increasing capabilities to provide survival information to the public during a period of developing crisis, starting training in the area of shelter management and accelerating training of radiological defense personnel.

Finally, the FY 1983 request provides for a real increase in matching-fund support for the State and local civil preparedness structure. This would permit new jurisdictions to enter the program, and additional personnel to be supported in jurisdictions now participating. This will, in turn, improve capabilities for management of both peacetime and attack emergencies.

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[Reproduced from U.S. Congress. Senate. Committee on Foreign Relations. Subcommittee on Arms Control, Oceans, International Operations and Environment. United States and Soviet civil defense programs. Hearings, 97th Cong., 2d sess. Mar. 16 and 31, 1982. Washington, U.S. Govt. Print. Off., 1982. p. 93–111.]

PREPARED STATEMENT OF JENNIFER LEANING, M.D., MEMBER, NATIONAL EXECUTIVE COMMITTEE, PHYSICIANS FOR SOCIAL RESPONSIBILITY, INC.

CIVIL DEFENSE IN THE NUCLEAR AGE: STRATEGIC, MEDICAL, AND DEMOGRAPHIC ASPECTS

Introduction

It is now becoming a matter of necessity to understand the evolution of civil defense in the last few years and its proposed function in the setting of nuclear attack and nuclear war. The civilian use of civil defense is familiar to most of us, as a series of programs designed to protect the continental U.S. non-combatant population from floods, tornados, hurricanes, earthquakes and forest fires. National disasters, often occurring without warning, have affected some of us; and we all recognize that civil defense efforts during these disasters have been important in reducing casualties and protecting property.

For a few brief years in the 1950's, during the height of the cold war, civil defense programs were introduced in a military setting as the United States became concerned about Soviet nuclear capabilities and sought measures to protect the U.S. population from nuclear attack. The efficacy of air raid drills and home bomb shelters came into question, however, as U.S. military strategists learned more about the thermal, blast, and radiation effects of these weapons from above and underground testing; as technological developments in the speed of delivery systems reduced options for population response; and as the doctrine of mutual assured destruction [MAD], became the accepted mechanism for ensuring nuclear stability. Since the weapons were so catastrophically powerful, and since both the United States and the U.S.S.R. could assure the destruction of the other were one to initiate an exchange, civil defense programs for the U.S. population in the nuclear age were allowed to dwindle into irrelevance.[1]

Now, again in response to developments in weapons systems, civil defense has re-entered the arena of national debate, promoted with a more explicit strategic rationale than ever. The weapons are more lethal, the scenarios more brazen, and the world peace more tenuous. As physicians committed to sustaining the health of our society and prepared to participate in all aspects of disaster management, the aims of civil defense in most contexts would be harmonious with our own. In the setting of nuclear war, however, a circumstance which engulfs us all in devastation of unprecedented scale, we submit that civil defense cannot ensure conditions for post-attack survival. To persist in planning as if it could divert the nation from its major task—the pursuit of a sound, comprehensive, bilateral disarmament agreement and the prevention of nuclear war.

The discussion that follows will first approach civil defense from the standpoint of the strategic uses such planning now serves and the psychological effect such planning may have. In the second section, crisis relocation, the current civil defense program, will be examined from the perspective of feasibility. The final section will analyze issues of post-attack survivability.

I. STRATEGIC AND PSYCHOLOGICAL USES OF CIVIL DEFENSE

Changes in military strategy to keep pace with technological developments in nuclear weaponry have in the last few years contributed to the replacement of the MAD concept of deterrence, based on parity, with the notion that stability can derive from superiority of arms. The United States has now openly declared its policy to be the acquisition and development of weapons systems that will produce unassailable nuclear superiority over the Soviet Union.[2] The need for superiority is based on the problems of waging war of any kind in the nuclear age. The validity of the concept is based on the notion of survivability. The civil defense is the method by which survivability is seen to be possible.

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[1] B. W. Blanchard. "American Civil Defense 1945–1975: The Evolution of Programs and Policies," University Microfilms International, Ann Arbor, Michigan, 1980, pp. 1–19. Joint Committee on Defense Production. "Civil Preparedness Review, Part I, Emergency Preparedness and Industrial Mobilization," 95th Congress, 1st session, U.S. Government Printing Office, Washington, D.C., February, 1977, pp. 3–38.

NATO doctrine calls for the first use of nuclear weapons in the European theatre if Warsaw Pact forces overwhelm allied conventional forces.[3] It is recognized among many arms control authorities that a theatre use of nuclear weapons may well not remain limited, and that the United States and the Soviet Union might be drawn into a strategic, global exchange.[4] In a world armed with nuclear weapons, for the United States to engage in war to protect overseas interests considered vital, it appears that the United States has to be willing to use nuclear weapons, and risk global nuclear war. If the United States has achieved overwhelming superiority in nuclear weaponry, however, it is assumed that the Soviet Union will not dare escalate from a tactical to a strategic exchange, since the United States will possess a sufficient number of warheads to survive a first strike (whether it be aimed at our military-industrial targets or directly at population centers) and then demolish the Soviet Union with a counterstrike of enormous magnitude.[5]

Here we encounter the question of "surviving" a Soviet first strike. For the United States to be in a position to retaliate with crushing effectiveness, the country must be able to withstand a 6,000 to 10,000 megation Soviet attack. It is at this point in U.S. military strategic thought that civil defense becomes so important. The United States could not be willing to escalate to a strategic exchange if it were evident to the Soviet Union, the U.S. people, and the world in general that it had made no attempt to protect its population from Soviet attack. With such preparation, it is argued, the Soviet Union will take seriously our declared intentions; without such provision, it will be clear to all that the United States is unwilling to risk escalation from tactical to strategic warfare, and therefore probably unwilling to risk full-scale conventional confrontation (since it is probable that within days of a major conventional conflict between the interests of the United States and the U.S.S.R. the war will escalate to involve tactical nuclear weapons). In other words, without civil defense, the U.S. military cannot use its weapons. Civil defense closes the loop in U.S. offensive strategy and allows the United States to wage war.

As President Carter defined the role of the civil defense in Presidential Directive 41:

> The United States civil defense program should enhance the survivability of the American people and its leadership in the event of nuclear war, thereby improving the basis for eventual recovery, as well as reducing vulnerability to a major Soviet attack;
>
> The U.S. civil defense program should enhance deterrence and stability, and contribute to perceptions of the overall U.S./Soviet strategic balance and to crisis stability, and also reduce the possibility that the Soviets could coerce us in times of increased tension.[6]

This policy has been continued under the current administration. Among the objectives of the civil defense program as detailed in March, 1982, President Reagan sought to:

> Enhance deterrence and stability in conjunction with our strategic offensive and other strategic defensive forces. Civil defense as an element of the strategic balance, should assist in maintaining perceptions that this balance is favorable to the United States;
>
> Reduce the possibility that the United States could be coerced in time of crisis;

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[2] L. R. Beres, "Nuclear Strategy and World Order: The United States Imperative," Working Paper Number 23, World Order Models Project, 1982. Institute for World Order, New York, N.Y., 1982. pp. 1–19. M. Bundy, G. F. Kennan, R. S. McNamara, and G. Smith, "Nuclear Weapons and the Atlantic Alliance," Foreign Affairs, Spring, 1982, pp. 753–768.

[3] "Nuclear Weapons," The Report of the Secretary General of the United Nations, Autumn Press, Brookline, Mass., 1981, pp. 117–122.

[4] H. Brown, Remarks delivered at the Convocation Ceremonies for the 97th Naval War College Class, Naval War College, Newport, Rhode Island, August 20, 1980. Bundy, et al, op. cit. G. Kistiakowsky, "Can a Limited Nuclear War Be Won?", Defense Monitor, 1981, v. 10, No. 2, pp. 1–4.

[5] Bundy, op. cit. Howard, op. cit.

"Information Bulletin. Questions and Answers on Crisis Relocation Planning," No. 305, Washington, D.C., April 20, 1979, p. 3.

> Provide for survival of a substantial portion of the U.S. population in the event of nuclear attack preceded by strategic warning, and for continuity of government, should deterrence and escalation control fail.[7]

It is always reassuring, when faced with an overwhelming situation, to have a plan for a way out. If confronting this overwhelming situation becomes a chronic condition, as it has for those of us in the nuclear age, having a way out becomes one of the many mechanisms we employ to avoid looking at where we are going. A civil defense plan appears to provide such an exit. The question is, for whom does civil defense planning appear to be reassuring?

There are two sectors to consider from the standpoint of Federal planning: the government bureaucracies involved in devising plans and implementing policy, and the American people, who are the subjects of the plans and the recipients of the policy. What is perhaps most significant about civil defense planning, and the policy that flows from it, is that the government bureaucracies are taking these plans most seriously and seem to be using them, as we have described, as part of government military strategy. Key officials in the Federal Emergency Management Agency (FEMA) now advocate civil defense planning as a viable means of protecting the U.S. population from attack. T. K. Jones, former advisor on Soviet affairs for Boeing and now Deputy Under Secretary of Defense for Strategic and Nuclear Forces, was recently quoted as saying that the United States would recover fully from an all-out war in just 2 to 4 years, given an adequate civil defense program. "Everybody's going to make it," he observed during the interview, "if there are enough shovels to go around . . . Dig a hole, cover it with a couple of doors and then throw 3 feet of dirt on top. It's the dirt that does it."[8] George Bush pointed out in February 1980, that with a civil defense program "you have a survivability of command and control, survivability of industrial potential, protection of a percentage of your citizens and you have a capability that inflicts more damage on the opposition than it can inflict upon you."[9] Eugene Rostow, in response to a question during his Senate confirmation hearings, said that nuclear war could be considered within a strategic context and that "Japan, after all, not only survived but flourished after the nuclear attack . . . Depending upon certain assumptions, some estimates predict 10 million dead on one side and 100 million on the other but that is not the whole population."[10]

Strategic planners promote the "rational" use of nuclear war and urge that the United States achieve the "ability to wage a nuclear war at any level of violence with a reasonable prospect of defeating the Soviet Union and of recovering sufficiently to insure a satisfactory postwar world order. . . . A combination of counterforce offensive targeting, civil defense, and ballistic missile and air defense should hold U.S. casualties down to a level compatible with national survival and recovery."[11] Such bureaucratic advocacy of civil defense planning suggests that the U.S. Government consider the use of nuclear weapons and the possibility of nuclear war a concrete eventuality, one to prepare to surmount with as much confidence as has previously been brought to contingency planning for other disasters.

The response of the American public to civil defense planning or nuclear war is evolving, as media discussions, educational programs, and government planning efforts become more widespread and detailed. Federal planners have found important allies in one section of public opinion, however—the survivalist movement.[12] This movement has attracted much attention and many adherents in those parts of the country most distant from target areas, most comfortable with wilderness conditions, and most individualistic in current life-style and political outlook. Civil defense planning falls right into behavior patterns survivalists can easily adopt: learn to travel light, live off what you carry, depend on others as little as possible, avoid crowded situations, and take care of yourself no matter what happens. The concept of fleeing to rural areas and learning to live off what the land may have holds few surprises, survivalists believe. Pamphlets, books, and journals supporting this point of view have proliferated in the past few years. Industries have developed, catering to needs for the best shelter equipment, water purifiers, masks and decontamination kits, self-help medical supplies and instructions, home generators, and effective methods for protecting what you have from someone who may try to come take it away. Survival.sm has attributes of the American individualist gone wild. In their public statements there is little recognition of the interdependence of life and their own ties to the civilization and economy they so casually write off. To quote from a prominent spokesman in their movement:

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[7] Federal Emergency Management Agency, Office of Public Affairs, News, Release No. 82–26, Washington, D.C., March 30, 1982, p. 2.

[8] T. K. Jones, as quoted in Los Angeles Times interview by R. Scheer, January 15, 1982, p. 22.

[9] G. Bush, as quoted in an interview with Robert Scheer of the Los Angeles Times, cited in February 17, 1980, The Washington Post, in answer to the question, "How do you win a nuclear exchange?".

[10] E. Rostow, in confirmation hearings before the U.S. Senate Committee on Foreign Relations, Government Printing Office., Washington, D.C., June 22 and 23, 1981, p. 49.

[11] C. Gray and R. Payne, "Victory is Possible," Foreign Policy, No. 39, Summer 1980, p. 14, p. 19, as cited in Beres, op. cit., pp. 19–20. Issues of The Journal of Civil Defense, (The American Civil Defense Association, P.O. Box 910, Starke, Fla.), articulate this trend.

[12] See issues of The Journal of Civil Defense, (The American Civil Defense Association, P.O. Box 910, Starke, Fla., 32091).

> I think it is probably true that a nuclear war would severely disrupt, perhaps destroy, the economic and social structure of the United States and Western Europe. . . . It is very egotistical of us, however, to state so blatantly our belief that the destruction of America . . . would be the end of civilization . . . it will not vanish just because our cities have been badly used. Don't worry about civilization. Concentrate on staying alive to enjoy it.[13]

Nor do they appear to understand the realities of the post-attack world. They assert that although the targeted areas include two-thirds of the U.S. population they comprise only 5 percent of the U.S. land area,[14] but with this statement they do not examine the short-term radiation and long-term ecological effects on the areas not hit by blast or devastated by fire.

Civil defense planning, then, seems to be serving the psychological purpose of allowing Federal officials to think that they have taken care of things back home, and of fueling a grandiose sense of self-reliance among some members of the American public. It gives officials and some members of our society a false sense of mastery which protects them from a confrontation we are asking everyone to make, a recognition that we are dealing with a threat qualitatively different from anything we have ever been compelled to face, a threat that requires of us a qualitatively different kind of response.

II. CRISIS RELOCATION PLAN

In analyzing the current U.S. civil defense plan, crisis relocation, questions of feasibility require attention. The focus in this section will be as much as possible on medical issues. A full analysis of the logistics of evacuation and shelter, the transportation and administrative details, is beyond the scope of this paper. The perspective to bear in mind, however, is that even if every aspect of evacuation and shelter went according to plan, even if all systems functioned as well as anticipated by FEMA, does crisis relocation in the setting of nuclear war promote a survivable situation? A response to this question, an evaluation of demographic survival in the first 2 years after attack, is the subject of the third section.

FEMA attack scenario and plan

A nuclear attack on the continental U.S. delivering 6,000 to 10,000 megatons and occuring without warning would kill 120–150 million of the U.S. population outright and millions more would die from the lethal effects of fallout, hunger, exposure, and disease. Civil defense officials have acknowledged that protection of the population in this setting, without massive commitment to in-place blast sheltering, would be unfeasible. FEMA has therefore concentrated its efforts on planning for a strike in a setting where the United States would have a 3- to 5-day period of advance notice. This setting is defined by a certain interpretation of Soviet strategy and nuclear war held by FEMA and a section of U.S. military opinion. In any attack on the United States, it is assumed that the Soviet Union would seek to destroy major military installations and industrial plants. About 250 cities with populations over 50,000 each, comprising two-thirds of the U.S. population or about 145 million people, are located directly within the blast effects of these targets. FEMA also assumes that the Soviet Union would not launch a pre-emptive strike on the United States without first protecting their own population, as much as would be possible, from the effects of a U.S. counter-attack, and would thus first execute their own civil defense plan and begin evacuating all major cities and population centers around industrial plants.

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[13] B. Clayton, "Nuclear Nonsense", Survive, Fall, 1981, p. 36.

[14] Defense Civil Preparedness Agency, "Information Bulletin, Materials for Presentation on Nuclear Protection," No. 306, Washington, D.C., April 26, 1979, p. 3.

Consequently, as FEMA foresees the course of events, in a setting of heightened world tension, such as conflict in the Persian Gulf, Eastern Europe, or the Caribbean, the Soviet Union might activate its civil defense plan. The U.S. satellite intelligence system would pick up this population movement, alert our military forces and civil defense system, and the United States would then have from 3 to 5 days (the estimated length of time for the Soviet civil defense plan to take place) in which to prepare for the anticipated Soviet pre-emptive strike. With these several days of warning, the FEMA plan calls for evacuating 145 million people from 250 cities to rural areas, where they should seek food and shelter with friends, or report to central camp areas where they would find food and supplies stockpiled and would have to build fallout shelters before the Soviet attack.[15]

Feasibility issues

The organizational and financial commitment required to put such a plan into operation might be seen as escalatory and provocative, creating a civil defense posture that purports to prepare us to survive nuclear war. The plan is politically very cumbersome, in that the costs of estimating inaccurately are very high. If the President were to misread the Soviet Union's intentions and activate our civil defense plan unnecessarily, there would ensue at least a major erosion of public confidence with significant economic loss and social hardship. At most, this large-scale evacuation could prompt the Soviet Union to launch a pre-emptive attack out of fear that the United States was planning to launch a strike of its own.

The estimate of 250 cities is conservative, assuming the Soviet Union would not primarily target population centers or re-target once crisis relocation were put into effect. Evacuating millions of people in a matter of days creates problems of social control and systems use totally without precedent. Evacuation routes are impractical: the southern half of Boston is to evacuate to Cape Cod, past the Pilgrim II nuclear plant, certain to be a target in itself, across one narrow bridge to the Cape, where sanitation facilities and water supplies can barely support the current influx of summer tourists. Destinations are casually designated, with little regard given to social reception, short-term shelter and food requirements, let alone long-term residence.

A sobering administrative problem is that completing the evacuation plans will require another 8 to 10 years, at current levels of funding; the sheltering components will take another 8 to 10 years of planning.[16] We are brought to the late 1990's, at which point American demographic patterns will have shifted sufficiently to render the evacuation plans obsolete. It is also apparent that unless arms control efforts are successful, the world will not have stood still, and by the late 1990's the Soviet arsenal will be able to blanket the continental United States with blast a well as radiation effects, making population movement irrelevant.

Public health problems of the evacuation and shelter period

It is instructive to examine some of these feasibility issues from an epidemiological perspective. FEMA proposes moving 145 million people an average of several hundred miles by air, road, rail, and water, over a 3- to 5-day period. This population constitutes a vast migrant social system, characterizable by its own epidemiology of public safety and public health. What this social system encounters, in terms of crime and disease, during its 5-day existence, will be derivable partly from what can be expected on a national or regional average for any 5-day period for that number of Americans. What variables are introduced by disruption, fear, and migration, what will be special to the refugee aspect of this social system, can only be a matter of speculation.

If we look at the evacuating population of New York City as an example, we see about 7.5 million people moving to upstate and western New York State over a 5-day period. An average 5-day period in New York City sees 404.5 deaths from heart disease, 1367.5 live births, and 944.5 total deaths.[17] It seems reasonable to estimate at least the baseline incidence of seizures, insulin reaction, strokes, respiratory arrests, and gastrointestinal hemorrhages. To what extent the stress of the evacuation would promote stress-related morbidity and mortality is unclear. A study of the incidence of depression and suicide among bombing victims in Northern Ireland from 1963 to 1977 noted that when social conditions promoted violent behavior in all sectors of the community, the incidence of severe depressive episodes and suicides declined, paralleling an increase in criminal and homicidal behavior. Further data for violent crime in New York City reveals a 5-day average of 21.6 murders, 44.5 violent rapes, 520.5 aggravated assaults, and 2733.6 burglaries.[19] One factor promoting an increase in the crime rate will be the obvious extent to which surveillance must be dispersed. The usual forces for law and order will be so occupied helping the population cope with an extraordinary situation that they will have less time and attention to spend on monitoring and controlling more deviant behavior. Another factor supporting an increased crime rate is that everyone, even people not usually prone to violence, will be so stressed by the pressures of time, fear of the unknown, and anger at traffic that survival mechanisms will be at peak force and people may react more violently if frustrated. Witness violence during the 1974 oil shortages at gas pumps across the country. The estimate of handguns held in New York City, legal and illegal, is well over a million.[20]

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[15] Ibid. DCPA, No. 305, op. cit. DCPA, "Information Bulletin, Research Report on Recovery from Nuclear Attack," No. 307, Washington, D.C., May 10, 1979.

[16] Committee on Armed Services, "Hearings on Military Posture and H.R. 2970, Part 6, Military Personnel and Civil Defense," 97th Congress, 1st session, Government Printing Office, Washington, D.C., 1981, pp. 797–789.

Deciding to what extent the medical population should be deployed to help with this volume of morbidity and mortality en route will constitute a complex administrative decision. Ascertainment of need will be haphazard: how will someone caught in traffic on the Triboro Bridge notify authorities that a passenger in his car seems to be having a heart attack? Access presents another problem: even if notification of need reaches a response station, how will the medical personnel get to the stranded victim? Given the imbalances between the resources available and the need, it might seem realistic to dispense with any attempt to affect the situation and concentrate all efforts on providing medical support at the destination sites. A presence of medical support, such as via helicopter, even if grossly inadequate, might be essential, however, from the standpoint of maintaining public confidence.

Similar questions from an epidemiological standpoint can be directed at the shelter component of crisis relocation. The logistical problems of constructing effective shelters (with protection factors, or PF, of at least 25)[21] within the postulated time constraints invites future analysis. Here we examine some of the health considerations produced by subjecting a population such as that of New York City to a minimum 30-day stay. (This is the minimum. Data exist to suggest the stay may have to be much longer in certain areas.)[22]

The shelter situation requires that everyone remain in the shelter until ambient fallout levels have decayed to nonlethal levels. Ventures out into the environment before that time will increase risk of radiation injury, depending on the level of radioactivity and duration of exposure. Assuming that everyone stays in the shelter until an all-clear is announced, each shelter will have to be stocked with sufficient food and water for a 30-day stay by its occupants and waste material will have to be sequestered within the confines of the shelter. The problems of coping with this volume of human waste in a hastily constructed fallout shelter should not be minimized. Storage in chemically treated containers will create volume requirements that must be anticipated at time of construction. An increased risk of odor pollution and disease can be expected with some certainty.

Air ventilation will demand close attention. Radioactivity, in the form of alpha and beta particles, will be airborne and will pass through standard commercial air systems. People in shelters will therefore be at risk from inhalation of internal emitters and, depending on the density of fallout, may find that contamination from the air system deposits surface radioactivity within the shelter. Air filtration systems to remove alpha and beta contamination are not widely developed for commercial use.

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[17] Phone communication with Martin Seigir, Assistant to the Chief of Vital Statistics, Department of Vital Statistics, New York City, January 26, 1982, data for 1980.

[18] H. A. Lyons, "Civil Violence—The Psychological Aspects", Journal of Psychosomatic Research, v. 23, 1979, pp. 373–393.

[19] Phone communication with Simeon Wright, Staff Analyst, Crime Analysis Unit, New York City Police Department, January 19, 1982, data for 1981.

[20] Phone communication with Dr. Paul Blackman, Director of Research for the National Rifle Association, January 5, 1982. His findings show 600–800,000 handguns, owned illegally in New York City but notes that law enforcement agencies "estimate" the number to be much higher.

[21] Office of Technology Assessment, "The Effects of Nuclear War," OTA, Washington, D.C., 1979, pp. 49–50 140–145.

[22] C. M. Haaland, C. V. Chester, and E. P. Wigner, "Survival of the Relocated Population of the U.S. After a Nuclear Attack," Oak Ridge National Laboratory, Oak Ridge, Tennessee, 1976, p. 39.

Monitoring reasonable environmental temperatures within the shelters may pose significant problems if the attack scenario and crisis relocation are activated in winter. Hypothermia and morbidity from cold exposure can intervene if environmental temperatures are sustained at 40 degrees F, especially if people are undernourished, damp, and stressed. Conversely, environmental temperatures above the mid-80's will increase fluid requirements for all people, and if maintained over a period of days, can induce problems of heat stroke in the elderly or chronically ill.

The ongoing medical needs of a sheltered population will not be met in the ways in which most people have come to expect. Again, the infrastructure for the delivery of health care will have markedly changed. Those with chronic illnesses requiring daily medications must have their own 30-day supply. (Where to obtain supplies thereafter, with 80 to 90 percent of the pharmaceutical industry destroyed,[30] has not been addressed.) These people include those with diabetes, seizure disorders, cardiovascular and pulmonary disease, and steroid-dependent conditions. In a 30-day period, this shelter population, even inactive, can be expected to sustain a number of fractures and lacerations that will have to be handled on a first aid basis by other members in their household.

Gastrointestinal disease will create serious difficulties by increasing fluid requirements, thus constricting group supplies and contributing to production of waste. Risks of death from dehydration will be greater, since the option of intravenous fluid administration may well not be available. The overall incidence of gastroenteritis, as well as most infectious and communicable diseases, will probably be higher than baseline, because of the close proximity of human beings to each other, their intimate proximity to human waste, and the interacting effects of radiation exposure and malnutrition.[31]

Thromboembolic disease will also probably increase in incidence, because of the enforced sedentary posture of the sheltered population. Labor and delivery will still occur, although obstetric complications could in general not be treated and fetal and maternal morbidity and mortality could be expected to rise.

Plans for the disposal of dead bodies will need to be devised. It should be recognized that of all the pressures leading people to leave the shelters prematurely, removal of corpses might prove most powerful. Requiring people to continue to remain in the shelters with a dead body might prove impossible to enforce, medically inadvisable, and psychiatrically unwise. If people are allowed to leave the shelter to dispose of bodies, the plan should restrict their exposure time to a minimum, perhaps by having graves, either individual or mass, dug in advance. The option of body bags is currently under investigation by FEMA authorities, who are considering furnishing each shelter with a number of bags depending on number of occupants and calculated 30-day death rate.[32]

Psychological stress in the shelters might be severe. Despite attempts to group families and friends together, undoubtedly many people of different ethnicity and class will be thrust into close quarters. Conflicts over food, water, space will be exacerbated by differences in life-style and coping patterns. The overall terror of impending attack and anxiety about outcome will certainly add a dimension of tension difficult to estimate. Even very stable people will find their equilibrium stressed by the tremendous social disruption, disorientation about future security, anger and grief at the turmoil and destruction, guilt about personal behavior.

III. SURVIVAL IN THE POST-ATTACK WORLD

This explication of some of the major problems and unknowns involved in crisis relocation has been marshalled to support the first proposition, that it is highly unlikely if not impossible for this process to occur as planned. Section

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[30] R. L. Goen, R. B. Bothun, and F. E. Walker, Potential Vulnerabilities Affecting National Survival, Stanford Research Institute, Menlo Park, Calif., 1970, pp. 15–33.

[31] H. Abrams, "Medical Problems of Survivors of Nuclear War", New England Journal of Medicine, v. 305, No. 20, Nov. 12, 1981, pp. 1226–1232.

[32] Personal communication from Robert Carpenter, Chairman of the Emergency Preparedness and Disaster Committee, National Funeral Directors Association.

III will examine grounds for suggesting that even if crisis relocation were to occur as planned, survival would be unattainable for a much greater fraction of the population than FEMA has estimated, and far more grim for the few who attempt it.

Survival studies

Current civil defense planning is based on an optimistic assessment of risk—i.e. that things will work well and proceed as planned. This optimism is at variance with serious planning in other realms, where, for instance, engineers plan for worst case scenarios and use materials tested to withstand conditions more severe than expected on the basis of past experience. Official assertions that with crisis relocation 80 to 90 percent of the U.S. population will survive a full-scale nuclear war and rebuild our society in 2 to 4 years have been met with widespread public skepticism. In response, FEMA officials have claimed that their projections are based on careful evaluation of extensive research. This claim does not withstand close scrutiny.

Since the early 1970's the Defense Civil Preparedness Agency (DCPA) and then FEMA have contracted with private and government consultants from Rand, Stanford Research Institute, Systems Research Corporation, and Oak Ridge to produce background reports on issues relating to crisis relocation response to nuclear war. FEMA authorities refer to these reports, now numbering approximately 370, to support their generalizations about population movement, attack parameters, and survival fractions.[26] Analysis of some of the more frequently cited reports reveal a range of problems arising from exclusive reliance on the data and conclusions they contain. The community of authors derives from a small group of consultants and closely overlaps, so that many of the same people write several reports and cross-reference themselves and their associates in citations. Crucial generalizations about attack parameters, radiation fall-out patterns, and social and economic effects derive from only a few main studies with the others drawing on these estimates to form the basis for their reports. The conclusions of the reports are often phrased more optimistically than the data within the reports would support. Much attention is devoted to transportation logistics and shelter construction, and very little to assessments of the post-attack situation beyond the first 30 days. In sum, although these studies contain interesting data, they offer less relevant, independent, or comprehensive information than one might initially expect from the list of titles. They provide insufficient grounds for FEMA's sanguine interpretation of probable outcome after a nuclear war.

Crisis relocation, however, has no intrinsic value unless it can be shown that the reduction in immediate casualties it might afford can be sustained during the post-attack period. If crisis relocation serves merely to forestall casualties, to substitute immediate death in the cities for a more protracted but nonetheless certain death in relocated areas, then it is pointless for the United States to proceed with a plan that spells such convulsive, cataclysmic disruption of national processes.

An estimate of survivability in the post-attack world becomes key to this policy decision. The research on this subject has only just begun. The following discussion will describe some of the pivotal factors influencing survival, summarize some of what is known, and define areas requiring further investigation. What is initiated here must be viewed as a most preliminary suggestion for a study that needs to be done.

The concept of survivability used in this discussion falls somewhere between the most sparse definition, biological persistence of the species, and the most inclusive, maintained potential to recreate modern American society. Survivability will be seen as possible if the material conditions for sustained population growth can be met. After a full-scale nuclear war on the United States, the factors affecting such sustained growth of population are:

(1) *Radiation effects.*—Both immediate consequences of initially high levels of radiation exposure and the intermediate-term effects of chronic exposure to moderate levels will be considered.

(2) *Food supply.*—Attention must be extended beyond the first few weeks to examine subsequent harvest potentials.

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[26] Committee on Armed Services, op. cit., pp. 848–855. Massachusetts Civil Defense Agency, "Crisis Relocation Planning . . . Questions and Answers," Framingham, Ma., no date, p. 30.

(3) *Infectious disease and epidemics.*—Discussion includes changes in the incidence of diseases known to be endemic in the population, resurgence of diseases now rare in North America, and synergism with effects of radiation exposure and malnutrition.

(4) *Alterations in the ecosystem.*—Ecological consequences of weapons explosions include effects of radiation exposure, climate change, ozone depletion, dust production, and soil erosion.

(5) *Psychological will to live.*—Whether people will have the psychological strength to continue the struggle for existence and procreation may remain the most fundamentally significant factor and perhaps the one most difficult to estimate.

Suggesting a demographic perspective, the following discussion examines the effects these factors will exert on the birth and death rates in the post-attack population.

The post-attack world

The people who remain will not recognize their world when they emerge from the shelters. Many familiar natural landmarks and most man-made ones will have been destroyed. The urban areas, home to most Americans, will be in rubble, and little will be left to draw people into the highly radioactive dust of what were once the downtown centers of life. Fires and blast effects may have destroyed or damaged much of the rural environment. Radioactive contamination of the land and water will present an incessant, uncertain hazard.

Meeting needs for shelter, food and water will be paramount. Shelters may still have to be used as home, since most of the nation's housing stock will have been destroyed. Destruction of the petroleum and much of the coal industries may force dependence on wood for fuel.[27] Building even rudimentary housing and foraging for wood takes energy. Food supplies will be very low. Food production will depend on many uncertainties, including availability of seed, extent of soil contamination, and season of the year.

Sanitary conditions will be primitive. Sewage and water systems will for the most part have been destroyed and makeshift ones may be inadequate. Millions of decomposing corpses from the attack and shelter period will require immediate burial or cremation. Insects, comparatively resistant to radiation and released from the constraints of their pre-attack predators (all of whom share radiation sensitivities more equivalent to human thresholds) will multiply.[28]

Radiation effects

Much is not known about the extent and intensity of fallout levels after a nuclear war on the United States. Uncertainties about attack parameters begin the list of unknowns. From the standpoint of an individual weapon release, it is estimated that a 1 megaton bomb ground burst with 50–50 fission-fusion characteristics would yield a radiation rate at 1 hour of 500 to 1,000 rads over 1,000 square miles.[29] A 1980's attack on North America on the scale of the CRP–2B model of 6,559 megatons would release lethal fallout over 5 million square miles, or approximately the area of the continental United States.[30] Targeted urban areas, if receiving several megatons at groundburst, might experience greater levels of fallout, ranging over 10,000 rads at 1 hour after explosion. It is estimated in the CRP–2B model that approximately 60,000 square miles of the United States would be so affected.[31] Whether such an attack scenario is most likely to apply, and whether the computer assumptions on which this projection of radiation release is based are valid constitute subjects for further investigation.

Survival in conditions of fallout delivering 500 to 1,000 rads per hour initially requires that the vast majority of the U.S. population be sheltered for at least 2 weeks in shelters with protection factors of at least 40.[32] Survival within the 60,000 square mile area of higher radiation will be more problematic since this area also encompasses that affected by intense blast and thermal effects. However, transit through or on the periphery of these or other unpredictable hot spots might well prove hazardous for several months after the attack.

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[27] A. M. Katz, "Life After Nuclear War," Ballinger, Cambridge, Mass., 1982, pp. 161–172.

[28] V. W. Sidel, et al, "The Medical Consequences of Nuclear War", New England Journal of Medicine, v. 266, 1962, p. 1136, 1142.

[29] B. T. Feld, "Mechanics of Fallout", in "The Final Epidemic," R. Adams and S. Cullen, eds., Educational Foundation for Nuclear Science, 1981, p. 114.

[30] Feld, op. cit., p. 115.

[31] C. M. Haaland, et al, op. cit., p. 39.

[32] Controversy over realistic protection factors is discussed in OTA, op. cit., pp. 140–145.

Radioactive decay curves for the first 6 months after a thermonuclear weapons explosion can be approximated as a decline by a factor of 10 for every 7-fold increase in hours of elapsed time.[33] Thus, if lethal levels of 1,000 rads per hour swept across the United States, the dose in the host areas at 49 hours, or 2 days into the shelter period, would be 10 rads per hour; at 2 weeks, 1 rad per hour; and at 100 days, or about 3 months, the rate would have decayed to .1 rad per hour. It is instructive to compare this dose rate with what has been set as the reasonable level for occupational radiation exposure in peacetime U.S. industry. According to the guidelines established by the National Council on Radiation Protection, a worker is allowed 5 rems per year, and a member of the general public 0.5 rems per year.[34] A dose rate of .1 rads per hour (for these purposes a rad is considered equivalent to a rem), will in 5 hours deliver what is considered a year's permissible exposure for a member of the general public. and in 50 hours deliver the same dose as that considered the maximum permissible annual dose for a worker. One week at that dose rate, .1 rads per hour, experienced 3 months after the attack, delivers 16.8 rads to each individual exposed.

Very little is known about the health consequences of this level of protracted radiation exposure. Published estimates are based on data drawn from Japanese victims of the bomb, radiation accidents, clinical radiation therapy experience, and animal experiments. It is known from this data base that doses of 20 to 50 rads will produce azospermia in men; that acute doses of 100 to 200 rads will produce fatigue, nausea, and vomiting in up to 50 percent of those exposed. An acute dose of 450 rads will kill 50 percent of the population, assuming adequate supportive medical care.[35] In the post-attack world, however, although a definite but uncertain number of people in the sheltered areas will receive significant doses of radiation within the first 2 weeks because of inadequate sheltering, the risks to the majority will be in subsequent cumulative effects of chronic exposures. It is simply not known what chronic exposure over months (to doses approximating 1,000 to 2,000 times that recommended now for the general public) means in terms of individual morbidity. The NCRP furnishes the following "Penalty Table" for estimated effects of chronic exposures on human beings.[36]

PENALTY TABLE

Medical care will be needed by—	Accumulated radiation exposures (R) in any period of—		
	1 week	1 mo.	4 mo.
None	150	200	300
Some (5 percent may die)	250	350	500
Most (50 percent may die)	450	600	

It is noteworthy that "some" and "most" are not numerically transferable to a modeling situation. Nor are morbidity questions answered by "medical care will be needed by some (5 percent may die)." What kind of medical care will be needed? How sick are those who do not die? It is important to be able to estimate the proportion who will be able to work, who will suffer from nausea, vomiting, or diarrhea, who will be azospermic or anovulatory, who will be susceptible to infection. The extent to which moderate chronic radiation exposure will decrease fertility, increase fetal wastage, and increase mortality from other causes (malnutrition, disease) are questions which require much more attention before the balance between reparative cellular mechanisms and continuous toxic effects of radiation exposure can be reliably estimated. What little is known suggests that human beings have less efficient repair mechanisms in the face of repeated doses than many species of animals.[37]

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[33] J. Smith and T. Smith. "Nuclear War: the Medical Facts, Medicine and the Bomb", British Medical Journal, v. 283, Sept. 19, 1981. p. 774. National Council on Radiation Protection, "Radiological Factors Affecting Decision-Making in a Nuclear Attack," NCRP Report No. 42. pp. 12–15.

[34] K. Kahn, "Health Effects of Nuclear Power and Nuclear Weapons," Physicians for Social Responsibility, Watertown, Mass., 1980, p. 30.

[35] Ibid.

[36] Ibid., p. 38.

Long-term health consequences of radiation exposure are somewhat more understood and quantifiable, although much controversy still surrounds questions of linearity and threshold. New analyses of Hiroshima data suggest that induction incidence estimates should be at least doubled.[38] From what is known of the induction time and magnitude of these consequences, however, they are not relevant to the discussion of survivability in the first several years after nuclear attack. The incidence of malignancies, congenital malformations, and genetic mutations will increase significantly and will certainly alter longevity and quality of life, but will probably not have dramatic conseqences for overall population growth. If the population survives, leukemia induction will begin to be expressed within 5 years after exposure, but solid tumor excess will not be seen until 10 to 40 years after the event.[39] Data that might have sobering relevance for quantifying the incidence of post-radiation cancer induction comes from a recent study of breast cancer patients, which suggests that highly fractionated doses of low-level radiation were as effective in inducing malignancy as larger, fewer doses.[40]

This discussion so far has considered risks only from external gamma radiation. Ingestion or inhalation of radioisostopes contaminating food, water, and milk presents another source of radiation injury. Quantifying the extent of radioactive contamination of the post-attack environment and then attempting to calculate the internal radiation risk this contamination poses for human beings has not been accomplished. Isolated studies on plant and animal contamination suggest that the risk may not be insignificant.[41]

Food supply

Whether and for how long there will be enough food to support the population remaining after a nuclear war on the United States depends in part on the estimated population size. If crisis relocation is as effective as claimed, approximately 145 million people will survive the immediate effects and they will persist into the shelter period. Food supply in the United States depends on three main factors: production, processing, and distribution. A marked imbalance between production and population characterizes U.S. agriculture. The northeast is heavily dependent on food production west of the Mississippi, in the southwest, and Middle Atlantic states. The Pacific Northwest produces five times more food than its population requirements and the northeast produces only two-thirteenths of its food needs.[42] Crisis relocation will not appreciably alter this relationship, since all people will move only 100 to 300 miles within their area.[43] Almost 80 percent of the food processing capacity of the country is located in high risk areas and would be destroyed in the war. Similar destruction of the distribution network (transportation systems and managerial personnel) can be anticipated.[44]

It is important to distinguish among effects on the crops growing at the time of the attack, availability of grain stores, and potential for subsequent crop production. It is estimated that approximately 43 percent of the total crop under production will survive a full-scale 6,559 megaton attack.[45] This estimate represents the average of several variables (time of year—June being the most damaging time for an attack to occur since radiation will kill germinating vegetation; kind of crop—grain, potatoes, soybeans, and rice listed in order of decreasing sensitivity to radiation). Because of destruction of distribution and processing facilities, however, it is not clear what percentage of the crop under production could be brought to the sheltered population. The breakdown of these systems, and the effects of lethal radiation, will make most of the nation's livestock supply unavailable for food.[46]

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[37] Ibid., p. 23.

[38] E. Marshall, "New A-Bomb Studies Alter Radiation Estimates", Science, v. 212, 22 May 1981, pp. 900–903.

[39] S. Finch, "The Study of Atomic Bomb Survivors in Japan", The American Journal of Medicine, v. 66, No. 6, June, 1979, pp. 899–901.

[40] J. D. Boice, Jr., et al. "Risk of Breast Cancer Following Low-Dose Radiation Exposure", Diagnostic Radiology, v. 131, June, 1979, pp. 589–597.

[41] International Atomic Energy Agency, "Environmental Contamination by Radioactive Materials," Proceedings of a Seminar, Vienna, March, 1969, passim. D. W. Bensen and A. H. Sparrow, ed., "Survival of Food Crops and Livestock in the Event of Nuclear War," U.S. Atomic Energy Commission, National Technical Information Service, Springfield, Va., 1971, pp. 131–168, 187–190, p. 455.

[42] J. W. Billheimer and A. W. Simpson, "Effects of Attack on Food Distribution to the Relocated Population," v. I. Systan, Inc., Los Altos, Calif., September, 1978, p. 2–1.

[43] Haaland, et al., op. cit. p. 27.

[44] Katz, op. cit., p. 157.

[45] C. M. Haaland, "Availability and Shipment of Grain for Survival of a Nuclear Attack", American Journal of Agricultural Economics, May, 1977, p. 361.

Consequently, immediate nutritional support of the post-attack population will have to be supplied by the grain stored in local warehouses and elevators near production sites and in regional wholesale centers. In general, annual grain stores in the United States since 1945 have been sufficient to meet the immediate basic needs of the population (3,000 calories per day, or 2 pounds of raw grain per person per day.) There have been several years and 6-month periods, however, when such stores have not been adequate.[47] Assuming that the attack occurs during a time when the United States has sufficient stores on hand, there are still two large problems in relying on stored grain for support of the post-attack population. To begin with, it is not clear from the studies of food supplies in this setting what percent of the grain stores will survive a nuclear war on the United States. Grain stocks in the centrally located warehouses may well be destroyed by attacks on these risk areas.[48] Grain stored on local farms in the Midwest may be contaminated by fallout. The second problem is one of distribution. Approximately 55 million people in the post-attack population will be located in areas with zero to 10 days of food supply on hand.[49] Grain will have to be transported from remaining grain stocks in rural areas to these areas of need, within 2 to 3 weeks post attack. No food processing will be possible and raw grain will have to be boiled to be edible. No grain is reserved for animal use.

Conditions in the post-attack world will pose tremendous obstacles to this transport task. Most railroad lines, bridges, and roads will have been destroyed. At least 60 percent of all fuel stocks will have been consumed in the attack.[50] The one government-funded study that addresses in detail the question of supplying the post-attack population with food concentrates only on the question of fuel availability, assuming that a sufficient fraction of the trucking and rail transport system will survive to carry on this transport function. The study predicts that at an estimated transport rate approaching 6 percent of pre-attack 1970 capacity, 305,000 tons of grain will have been shipped in a 6-week period several trillion miles to the areas of need. Fuel supplies, this study estimates, "would last for 236 days, which is probably adequate to carry the nation through the survival stage into the recovery stage." [51]

The problems with this analysis are numerous. Disruption of transport networks cannot be assigned fractional values because of bottleneck dysjunctions. The rate and volume of grain shipped does not match need: 150.000 tons of grain are shipped in the first 2 weeks, furnishing 5.45 pounds of grain per person, assuming the population in need to be the 55 million with stocks of zero to 10 days post-attack, furnishing less than a 3-day supply for the entire 2-week period. The apparent destinations for this transported grain are listed as Boston, Hartford, New York City, Albany—all high risk areas and theoretically evacuated. Getting this grain supply to the host areas is the relevant, and more difficult task. What fuel exists in storage may not be near the trucks that may have survived the attack. Transport to the areas of need within the first two weeks may require transit through or on the periphery of intense radiation and engaging workers for this task may prove unrewarding. The study suggests that the transport effort will require an intact Federal Government and a form of Federal promissory note that local farmers will honor. Food hoarding or consumption of fuel supplies for any other task but transport of food is not considered. Finally, nothing supports the assumption that after 236 days, or 7.8 months into the post-attack period, the agricultural economy would have reached a "recovery stage." Many considerations suggest that, in fact, the food situation after the first 6 months post-attack will have become more severe.

After the first 6 months, all stored grain would have been consumed. The need to conserve seed supplies is not discussed in the government literature. Production factors in modern American agriculture include fertilizer, pesticides, heavy machinery, and irrigation. These all depend to a large extent on the existence of functioning refinery and petro-chemical industries, most of which would have been destroyed in the attack. Loss of fertilizer is estimated to result in

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[46] Haaland, et al., op. cit., pp. 109-115.
[47] Ibid., p. 110.
[48] J. W. Billheimer and A. W. Simpson, op. cit., p. 2–3.
[49] Haaland, et al, op. cit., pp. 146–147.
[50] Haaland, op. cit., p. 364.
[51] Ibid., p. 364.

50 percent decrease in major crop yield. Without pesticides, production of potatoes, vegetables, and fruits would be adversely affected, especially in the setting of the post-attack world where insect vectors will have increased disproportionately because of their relative radiation resistance. Loss of fuel for farm machinery and irrigation pumps will markedly reduce agricultural yields; it is estimated that reduction of petroleum use to 20 percent of pre-attack levels would cut farm production to 30 percent of normal.[52]

Currently about 6 percent of the U.S. population is involved in agricultural production. Regardless of what extent a remnant of skilled farmers may survive the attack, the majority of the population will have had little experience with farming. People will be disoriented, hungry, perhaps ill from radiation and disease. The work required to prepare and plant fields may be beyond the capability of many.

Questions about soil and seed contamination, when people are very hungry, will most probably be dismissed, and some crops may be planted with little regard for radioactivity. Without fertilizer, pesticides, equipment, or skill, in a contaminated terrain infested by insects, planting such crops carries much risk of failure.

For all these reasons, the yield cannot be expected to compare with the pre-attack world. Estimates of production in the first several years after attack are beyond the scope of this discussion, but it is clear from the variables mentioned that problems with food production and distribution may exert significant negative constraints on population survival. In times of hunger, conserving seed from one growth's crop to use for the next season can prove socially and physically impossible. Areas that plan better and have better luck will become targets of attack from other groups in need. The situation in the course of two growing seasons could become most desperate. Living as they did on the margins of existence, two successive failures of the potato crop in 1846 and 1847 spelled death for close to 25 percent of the Irish population.[53] The starkness of this view needs no recourse to more conjectural possibilities, such as whether depletion of ozone or injection of atmospheric dust will make crop production in North America for the succeeding 5 to 20 years completely impossible. In this way, persistent famine could be seen to characterize the post-attack world.

Infectious disease and epidemics

The incidence and relative virulence of infectious disease will increase enormously in the years after the nuclear attack. Change in characteristics of both host and environment may lead to morbidity and mortality rates rarely before recorded. Environmental conditions post attack will create conditions for the abundant spread of disease: (1) crowding, during the shelter period and thereafter because of inadequate housing stock; (2) inadequate ventilation; (3) destruction of sanitary systems with accumulation of sewage and waste; (4) absence of refrigeration leading to food spoilage; (5) the presence of millions of corpses; (6) exuberant overgrowth of insects. The population that remains will in turn be able to offer only reduced resistance to disease. The complex interactive effects of stress, malnutrition, and lingering radiation will weaken human immune systems and physiological defense mechanisms to the point where people may succumb to diseases of previously low virulence. A study of the role of communicable diseases in the post-attack environment reveals that potential pathogens include familiar respiratory and gastrointestinal diseases of high endemicity but of low mortality in the pre-attack United States, and diseases of previously low or eradicated incidence in the United States which, because of the prevailing post-attack conditions, will recrudesce and contribute significantly to increased mortality. Among the first category are the viral and bacterial diarrheas, hepatitis, pneumonia, diptheria, whooping cough, and tuberculosis. The second category includes cholera, malaria, plague, smallpox, and typhoid fever.[54]

Throughout the history of the world, epidemic disease has struck populations with devastating mortality consequences. In some instances, as in the 19th century European cholera epidemics, the concomitant famine conditions clearly contributed to increased susceptibility of the population. In other cases, such as the annihilation of the Aztecs by smallpox or the deaths of one-third of Europe during the plague, the sudden introduction of a new virulent disease to which the population had no immunity made the relative contribution of other host factors irrelevant.[55]

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[52] Katz, op. cit., p. 149.

[53] C. Woodham-Smith, "The Great Hunger," Harper, New York, 1962, pp. 411–412.

[54] Abrams, op. cit.

In the setting of the post-attack world, erosion of host defenses and environmental changes fostering the spread of endemic and epidemic disease may combine to create a potential mortality crisis of severe proportions. Public health and medical measures will be virtually non-existent. Most medical centers will have been consumed in the attack. No vaccines or antibiotics will be available beyond those stockpiled, since the pharmaceutical industry will have been destroyed. Strict rationing of antibiotics and vaccines will be necessary. In the absence of laboratory facilities, antibiotics will be prescribed at best on the basis of clinical hunch. Without supportive and intensive medical care, they can do little to combat some of the more dangerous bacterial diseases, and against most viral diseases are largely ineffective. Immunization, the only means of controlling diseases such as tetanus, measles, and poliomyelitis, may not prove effective for people whose immune systems have been weakened by radiation. Existing stocks of antibiotics and vaccines will be unable to combat whatever new pathogens or resistant strains may develop.

Under these conditions, estimates of plague incidence approach 12 percent of the population, with half of those contracting the disease dying. Within the first year after the attack, total deaths from all communicable diseases is estimated at 20 to 25 percent of the immediate post-attack population.[56] Those at the extremes of the age spectrum, the very old and the very young, will probably succumb first to the ravages of disease.[57] Virulent diseases such as plague, however, will strike everyone, and these effects on the age structure of the population are less easy to predict.

The cumulative mortality from infectious disease in the post attack world merits further careful study. What is known from examining the historical record may have somber application to this setting: death rates among societies living at the margins of agricultural production (and such is at best a characterization of post-attack America "show a remarkable tendency to recurrent, sudden dramatic peaks that reach levels as high as 150 or 300 or even 500,000 . . . the intensity and frequency of the peaks controlled the size of agricultural societies."[58] Furthermore, "historical experience suggests that something like 120 to 150 years are needed for human populations to stabilize their response to drastic new infections."[59]

Alterations in the ecosystem

It is estimated that with the megatonnage exchanged in a full-force nuclear war, between 40 and 70 percent of the world's ozone layer could be destroyed.[60] This layer shields all animal and plant life from the effects of ultraviolet radiation and contributes to insulating the earth's surface from heat loss. Destruction of this amount of ozone protection will produce effects of uncertain magnitude of potentially enormous significance. Humans and animals would sustain third degree burns on exposed surfaces after one hour outdoors. Sunglasses would be necessary during all daylight hours. Whether plant photosynthesis could be maintained is uncertain, raising vast related questions of carbon dioxide and oxygen supply for the earth. It is also unknown the extent to which loss of ozone would expose microscopic plankton to toxic thermal injury and thus possibly compromise an essential component of the ocean food chain. This loss of ozone might reduce the earth's temperature by one to one and a half degrees centigrade, sufficient to increase the extent of the polar ice caps, eliminate the Midwest from crop production, and constrict suitable agricultural areas in the United States to only the most southern region. It would take at least 30 years for the ozone layer to regenerate, and during this period ecological derangements could be extreme.

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[55] W. H. Neill, "Plagues and Peoples," Anchor. Garden City. N.Y., 1976, pp. 149, 176–185. E. A. Wrigley and R. S. Schofield, "The Population History of England 1541–1871," Harvard University Press. Cambridge, Ma., 1981. pp. 332–336. T. H. Hollingsworth, "Historical Demography." Cornell University Press, Ithaca, N.Y., 1969, p. 356.

[56] Abrams, op. cit., p. 1231.

[57] N. Hanunian "Dimensions of Survival: Postattack Survival Disparities and National Viability." Rand Corporation, Santa Monica, Ca., 1966, pp. 67–69.

[58] C. M. Cipolla, "The Economic History of World Population," London, 1962, pp. 76–77, cited in E .A. Wrigley and R. S. Schofield, op. cit., p. 450.

[59] W. H. McNeill op. cit., p. 51.

[60] National Academy of Sciences. "Long-Term Worldwide Effects of Multiple Nuclear-Weapons Detonations." NAS, Washington, D.C., 1975.

A full force nuclear attack would inject approximately 10^7 to 10^8 tons of dust and debris into the atmosphere, threatening in the short term to block the effects of the sun and cause measurable changes in ambient temperature. Destruction of much of the vegetation cover of North America in the initial and secondary fires of the attack would create further severe problems with dust and might markedly accelerate soil erosion.

Only an impoverished imagination would depict post-attack America as simply a frontier with fewer people in it than we have now. Eighteenth century America contained thousands of clean lakes and rivers, millions of square miles of virgin forest and rich land, and wildlife and plant forms of almost enormous abundance. The post-attack terrain may well be burnt barren of vegetation, stripped of animal life, infested by insects, and blistered by the unfiltered ultraviolet rays of the sun.

Psychological will to live

This discussion ventures into unexplored territory, proceeding from what is described in the disaster literature. A constant finding in retrospective studies of disasters and of people in extreme situations is that given a sufficient stress everyone will develop symptoms. The intensity of stress or the type of stress is more important in determining the nature of these symptoms than the premorbid personality of the individual.[61] Dividing the disaster experience into time stages, phases of disaster response have been described specific to each stage. The impact phase of the disaster forces people into either alert, purposeful behavior or reactions of denial and disbelief. One large study projected that 12 to 25 percent of individuals would remain effective; 75 percent would be dazed and stunned; and 12 to 25 percent would be thrown into panic or acute confusion.[62] A medical doctor witnessing the crowd fleeing Hiroshima in the first few hours after the attack wrote:

Those who were able walked silently towards the suburbs and the distant hills, their spirits broken, their initiative gone. When asked whence they had come they pointed to the city and said, "that way"; and when asked where they were going, pointed away from the city and said, "this way." They were so broken and confused that they moved and behaved like automatons. Their reactions had astonished outsiders who reported with amazement the spectacle of lone files of people holding stolidly to a narrow, rough path when close by was a smooth, easy road going in the same direction. The outsiders could not grasp the fact that they were witnessing the exodus of a people who walked in the realm of dreams.[63]

After the impact, in the inventory phase, those who have coped will have a sense of mastery, while others will continue to evince dazed apathy. In settings of massive destruction, people become so isolated that psychoses deriving from sensory deprivation may occur. An increased incidence of situational psychoses has been noted with fatigue, physical trauma, or delay in rescue. Remedy and recovery phases may never be fully achieved, even after disasters on a scale incomparably smaller than nuclear war.

From studies of natural disasters, concentration camps, Hiroshima, Nagasaki, and Vietnam, a clear picture of what has been called the "survivor syndrome" emerges.[64] In Lifton's study of the Hiroshima survivors (the hibakusha, or explosion-affected people), the survivor syndrome had the following characteristics: a pervasive guilt, feelings of having failed those who had died; a residual image of ultimate horror; primitive anxieties of separation and annihilation; continuing fear of radiation effects with psychosomatic symptoms, and a sense of grotesque contamination, applied to radiation victims and internalized by them.[65]

Generalizations from the Japanese experience and from other major disasters cannot begin to encompass the nature of psychological response after a nuclear war. Without historical precedent for an event that might destroy the totality of society, there are also no psychological precedents. The Black Death swept across Europe from 1346 to 1350, killing an estimated third of the populace, and leaving such misery in its wake that a witness, who succumbed, felt "the whole world, as it were, placed within the grasp of the Evil One."[66] According to one historian of the period:

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[61] F. Hocking, "Psychiatric Aspects of Extreme Environmental Stress", Diseases of the Nervous System, v. 31, 1970, pp. 542–545.

[62] D. K. Kentsmith. "Minimizing the Psychological Effects of a Wartime Disaster on an Individual", Aviation, Space, and Environmental Medicine, April. 1980. pp. 409–413.

[63] M. Hachiya, "Hiroshima Diary," University of North Carolina Press, Chapel Hill, N.C., pp. 54–55.

[64] A. H. Barton, "Communities in Disaster." Anchor, Garden City, N.Y., 1970. B. C. Chamberlain, "The Psychological Aftermath of Disaster", Journal of Clinical Psychiatry, v. 41, No. 7. July, 1980, pp. 238–244. R. E. Cohen and F. L. Ahearn. Jr., "Handbook for Mental Health Care of Disaster Victims." Johns Hopkins University Press, Baltimore, 1980. F. C. Ikle. "The Social Impact of the Bomb Destruction," University of Oklahoma Press, Norman, Oklahoma, 1958.

[65] R. J. Lifton, "Death In Life," Simon & Schuster, New York, 1967.

> Emotional response, dulled by horrors, underwent a kind of atrophy epitomized by the chronicler who wrote, 'And in these days was burying without sorrowe and wedding without friendschippe.' In Siena, where more than half the inhabitants died of the plague, work was abandoned on the great cathedral, planned to be the largest in the world, and never resumed, owning to loss of workers and master masons and the 'melancholy and grief' of the survivors. The cathedral's truncated transept still stands in permanent witness to the sweep of death's scythe.[67]

Yet the buildings that had been standing, remained. The infrastructure of communications, transportation, and economy persisted. The environment did not alter. When the plague had passed, the world could again become familiar.

An erosion of will to live, to struggle, to grow, to reach out to the world characterizes, for a period of time, most survivors of extreme disasters. What aborts the healing process and allows this apathy to persist in some people for the duration of their lives is not clearly understood. Enormity of loss, contributing to a sense of futility and absence of hope, may play a significant role. In the post-attack world there will be nothing, for a long time, to dilute one's encounter with death.

It might take some time before the cultural losses become real to the people who remain. Their attention, if it can be directed at anything, may be taken up with attempts to forestall hunger, cold, and disease. At some point in the months after the attack they may sink into consciousness the realization that the nation's libraries, museums, architectural treasures, and educational and scientific centers had all been destroyed. The bequests from past generations would have been consumed in a few hours.

It might also take months or years for an accurate assessment of the numbers of lives lost, assuming some people have the courage to sustain the inquiry. Initially, people in separate locales may think that they only have survived, or they may hold to the illusion that most people have lived, and the many they miss are safe in some other area. Guilt at surviving and denial of loss will most certainly be among the prevailing psychological reactions and may contribute to a persistent, widespread depression.[68]

Summary of demographic effects

Questions of mortality during the first few years after a full-scale nuclear war on the United States require more comprehensive attention than they have received. The Office of Technology (OTA) analysis comparing estimates from the Department of Defense (DOD) and the Arms Control and Disarmament Agency (ACDA) provides the most extensive data available.[69] These mortality estimates are based on direct blast and thermal effects and on 30-day radiation effects. The ranges reflect varying assumptions about percent of the population evacuated and adequately sheltered. Other weapons effects, such as conflagrations and possible firestorms, have not been included in these estimates, because they are less predictable. It is assumed that only one exchange takes place, initiated by the Soviet Union. The mortality from the more realistic case, a protracted series of attacks, although considered to be much greater, has not been estimated in any published analyses. Higher order damage mechanisms, such as synergistic effects from radiation, stress, disease, and hunger during the first 30 days or into the first year, have not been quantitated.

Beginning from the preceding discussion of factors influencing prospects for survival in the post-attack period, the OTA data will be applied to a series of adjustments, in order to arrive at an assessment of cumulative mortality by the end of the first two post-attack years. These adjustments are based as much as possible on what is known about previous population encounters with radiation, hunger, infectious disease, environmental devastation, and stress. Much of what is projected has either never before occurred or never taken place on such scale, however, and the adjustments must be viewed as tentative, preliminary attempts to arrive at an appropriate order of magnitude to describe the mortality that might evolve. The intention is to underscore the need to embark on a more thorough investigation of the demography of the post-attack world.

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[66] B. W. Tuchman, "A Distant Mirror," Alfred A. Knopf, New York, 1978, p. 95.
[67] Ibid., p. 96.
[68] B. C. Chamberlain, op. cit.
[69] OTA, op. cit., pp. 140–145.

For the sake of simplicity, without sacrificing much accuracy, the discussion will begin with a range of immediate 30-day mortality taken from the OTA scenarios, representing the high figure of the low range and the low figure of the high range defined by DOD and ACDA data for an attack similar to the CRP–2B model used by FEMA. Both figures used assume 80 percent of the U.S. population has been evacuated to shelters in the host areas. The realism of that assumption can be challenged on other grounds; the discussion here focuses on survivability, granting a near-perfect performance of crisis relocation.

The mortality figures estimate only immediate direct blast and thermal effects and 30-day radiation fallout effects. Using the U.S. population base as 225 million, the low figure of 26 percent fatalities translates to 58.5 million deaths and the high figure of 32 percent to 72 million deaths. It is estimated, however, that in that attack non-fatal injuries would vary from 20 to 40 percent of total casualties.[70] Taking the mid-range, or 30 percent, the number of non-fatal casualties for the low figure would be 25 million, and the number of such casualties for the high figure would be 30.8 million.[71] Given shelter conditions, with absence of medical care, potential for disease, and synergism of radiation effects and stress, it is not unrealistic to assume that half of these non-fatal casualties would die at the end of 30 days. This number is especially conservative since some fraction of those injured would not have made it to shelters and would have died from more intense radiation levels, environmental exposure, and perhaps the effects of the fires.

With this adjustment, at the end of the 30-day shelter period, the total deaths are 71 million or 31.5 percent of the pre-attack population for the low figure, and for the high, 87.4 million deaths, or 38.8 percent.[72]

During the remainder of the first year, some fraction of the population emerging from shelters will suffer from radiation illness, epidemics of disease, hunger or perhaps true famine, and environmental exposure. Enough is known about the effects of infectious disease during this period to suggest that first-year mortality might approach 25 percent of the remaining population. Given what is understood about levels of past mortality crises, and given the unprecedented sweep of devastation inflicted by nuclear war, it would seem plausible to suggest that the synergistic and aggregate effects of these other factors could claim the lives of another 15 percent of the population. The first-year mortality rate thus becomes 40 percent of the population surviving the shelter period. This figure is still less than that calculated for some of the worst mortality crises in past centuries, and so may, with further research, prove an underestimate.

This mortality of 40 percent of the population surviving the shelters would place the low range figure for the number of deaths at 61.6 million, and the high range figure at 55.04 million.[73] Total deaths by the end of the first year, summing deaths within the first 30 days and within the first year thereafter, become 132.6 million deaths or 58.9 percent mortality for the low figure and 142.44 million deaths or 63.3 percent mortality at the upper range.[74]

The mortality pressure will not abate, however, at the end of whatever calendar marks the year. Persistent inadequacy of sanitation facilities and medical care would allow continued spread of infectious disease. Epidemics have been shown to occur in waves, striking new susceptibles over several generations, and this in settings where the health of the population was not constrained by radiation effects on the immune system and severe privation.[75] Supplies of food may well be lower at the end of the year than immediately post-attack, and, as discussed, the fate of the subsequent harvest, were there to be one, would be problematic.

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[70] Ibid., p. 144.

[71] Total casualties for low figure equals 83.6 million times 0.3 equals 25 million non-fatal. Total casualties for high figure equals 102.9 million times 0.3 equals 30.8 million non-fatal.

[72] Low figure: 225 million times 0.26 equals 58.5 million deaths. High figure: 225 million times 0.32 equals 72 million deaths. Total deaths at end of 30 day shelter period: Low figure: 58.5 million plus (25 million times 0.5) equals 71 million or 31.5 percent. High figure: 72 million plus (30.8 million times 0.5) equals 87.4 million or 38.8 percent.

[73] Low figure: 225 million minus 71 million equals 154 million times 0.4 equals 61.6 million deaths. High figure: 225 million minus 87.4 million equals 137.6 million times 0.4 equals 55 million deaths.

[74] Low figure: 71 million plus 61.6 million equals 132.6 million deaths or 58.9 percent first year cumulative mortality. High figure: 87.4 million plus 55 million equals 142.4 million deaths or 63.3 percent first year cumulative mortality.

[75] W. H. McNeill, op. cit., pp. 184–186.

The second year could very arguably, then, be shown to exert the same high mortality rate, 40 percent, as the first. Such a sustained rate yields, on the low side of the estimate, a population of 55.5 million remaining, or 25 percent of the pre-attack population and on the high mortality range, 49.6 million remaining, or 22 percent of the pre-attack population.[76] By the end of the first 2 years post-attack, at least three-fourths of the pre-attack population would have died, with the cumulative deaths in those 2 years virtually equal to the numbers killed by the immediate effects of the weapons themselves.

These mortality calculations should be viewed as augmenting the baseline mortality of the U.S. population, but several factors work against a simple addition. Some of the people who would have died from cancer or stroke would die instead from burns or plague. The conditions for some causes of death, such as motor vehicle accidents, would no longer apply on a significant scale, since disruption of transportation networks and fuel shortages would eliminate most traffic. Consequently, integration of baseline mortality within the mortality of the attack and post-attack situation must await more detailed analysis.

A thorough search of the historical record and demographic literature would be necessary to define all the factors that spell extinction for one population exposed to severe mortality crises and permit re-growth for another. In general, populations who have survived these crises have done so by developing new immunities and increasing their birth rates. Both of these responses in the post-attack world may be dampened considerably because of the interactive effects of radiation and protracted malnutrition on the immune and reproductive systems.

Radiation exposure at sufficiently low levels to remain asymptomatic may still depress white blood cell counts. Lymphocytes, among the cells most essential to the immune system, are especially sensitive to radiation.[77] At a severe level of malnutrition, people become susceptible to infection, regardless of their immune status. The years it takes even basically healthy populations to develop new immunities may not be available to people in the post-attack world.

The effects of radiation exposure on the human reproductive system are complex and incompletely understood. Low radiation exposures, in the range of 20 rads, induced azospermia among survivors of Hiroshima for several months to years after the attack. Nine months after that attack, 10 to 12 men examined were effectively azospermic; 22 months after, another cohort of 32 men were examined, and approximately one-third had sperm counts in the range considered sterile. Menstrual disorders were common among women who had survived Hiroshima. Over 70 percent of those examined had irregular menses, with 78 percent returning to normal patterns by the end of 7 months. Fetal wastage in Hiroshima cannot be quantitated, since most pregnant women had been evacuated prior to the bombing. In Nagasaki, however, of the 177 pregnancies investigated, 18.6 percent ended in miscarriage, 6.8 percent in premature delivery. The incidence of microcephaly and other congenital malformations among all births was markedly correlated with in utero radiation exposure.[78]

Conditions of the post-attack world raise doubts about the fertility potential of the remaining population, at least for the first 2 years. Infant mortality in these stark circumstances would undoubtedly exceed the high rate for the general population. Whether interest in establishing relationships and engaging in sexual activity would be sustained, and at what relative level, is no less important a question simply because it cannot be answered within the scope of this discussion. Loss of libido among Hiroshima survivors was frequently found for the first 2 to 3 months after the bombing.[79] and is a common feature of the survivor syndrome. The issue is raised, as with many others, to point out the extent to which our ignorance prevents us from quantifying very significant variables.

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[76] Low figure: 225 million minus 132.6 million equals 92.4 million (times 0.4) equals 37 million deaths. 92.4 million minus 37 million equals 55.4 million remaining, or 25 percent of the pre-attack population. High figure: 225 million minus 142.4 million equals 82.6 million (times 0.4) equals 33 million deaths. 82.6 million minus 33 million equals 49.6 million remaining, or 22 percent of the pre-attack population.

[77] K. F. Hubner and S. A. Fry, eds., "The Medical Basis for Radiation Accident Preparedness." Elsevier/North-Holland, New York. 1980, p. 298.

[78] Committee for the Compilation of Materials, "Hiroshima and Nagasaki." Basic Books, New York, 1981, pp. 152-153. J. Smith and T. Smith. "Long-Term Effects of Radiation. Medicine and the Bomb", British Medical Journal, v. 283, 3 October 1981, p. 908.

[79] Committee for the Compilation of Materials, op. cit., p. 151.

Drawing together this series of adjustments to the OTA estimates of initial post-attack mortality, it is seen to be very possible that the remaining population of the United States, some 50 to 55 million people at the end of the first 2 years, might continue to be reduced to a fraction of that number in the ensuing decade. To reverse the oppressive mortality rates of the first 2 years post-attack might require a regeneration of technological and economic capacity beyond the reach of those who remain. The cumulative effect of these factors sustaining high mortality rates and suppressing birth rates suggests that human population dynamics after a full-force nuclear attack on the United States might persist in a negative pattern for several years. Survivability might seem less obtainable 2 years post-attack than upon emerging from the shelters.

CONCLUSION

As an element of military offensive strategy, civil defense in the nuclear age serves to delude Federal officials and a few members of the populace into thinking that nuclear war can be waged with relative impunity. As a public health program, current civil defense plans fall short of evaluating issues of feasibility, medical care, and long-term health consequences. The demography of the post-attack world, when evaluated in light of the factors affecting survivability, does not support bright predictions of outcome.

That the problems of crisis relocation are myriad has certainly not escaped civil defense planners. They recognize some of the major drawbacks with the plan and are in the process of designing other, more extensive plans that do not rely on massive population movements and 5 days of warning. These plans, involving construction of in-place blast-resistant shelters for the entire U.S. population, have not yet been advocated as public policy. But they are suggested, in the studies under contract to FEMA, and in FEMA congressional testimony. In a few months to a year we may see such proposals, recommending expenditures of $100 billion, in fiscal year 1981 dollars.[80] So it is important for us to realize that the problem with civil defense planning in the setting of nuclear war lies not with the specific plan, but with the concept of survivability.

To evaluate that concept as applied to the post-attack world, we must stretch our understanding of what existence may or may not mean for those of us who might survive to see it. Our cities in rubble, our land burned and contaminated, our friends and relatives gone, future grimly foreshortened by prospects of famine and disease. Civil defense cannot change what the weapons can do.

If, after considered evaluation, it is seen that civil defense cannot protect the elements of our life and society we deem essential, then perhaps we need to call for an entirely different approach to the problem of nuclear war. If we begin with the understanding that nuclear war is not in any humane or civilized sense survivable, the path becomes clear: civil defense planning for nuclear war is delusionary behavior and should not be encouraged. All our efforts must be directed at prevention.

NUCLEAR FREEZE: ARMS CONTROL PROPOSALS

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ISSUE DEFINITION

There is growing concern amidst the public in general and within Congress about the size of the nuclear arsenals of the United States and the Soviet Union and the future of strategic arms control. Numerous localities across the nation have passed resolutions calling for an immediate end to the strategic arms race, and in favor of renewed efforts to achieve a new arms control agreement between the U.S. and the U.S.S.R., especially as SALT II remains on the calendar in the Senate without plans for further consideration.

Many Members of Congress have introduced resolutions intended to achieve the same or similar ends, some of which have attracted significant support in both Houses including H.J.Res. 521, which passed the House Foreign Affairs Committee on June 23, 1982. President Reagan has endorsed one of these proposals as part of his call for reductions in nuclear forces. Also, on May 9, 1982, the President revealed his two-stage START (Strategic Arms Reduction Talks) proposal. He called for reductions, during the first phase, of ballistic missile warheads to equal levels at least one-third below current levels, with no more than half of the remining warheads to be landbased. The second phase provides for equal ceilings on other elements, including ballistic missile throwweight.

Heightened public and congressional concern, and the various proposals themselves, raise the following questions:

-- What are the reasons for this growing concern?

-- What effect might a freeze have on the defense budget and on the budget deficit?

-- What are the possible effects on President Reagan's strategic force modernization program?

-- What are the possible effects on the capabilities and survivability of U.S. strategic forces and on the U.S.-Soviet strategic balance?

-- Could a freeze be successfully monitored?

-- What are the possible effects on the U.S. negotiating position in Strategic Arms Reduction Talks?

-- What are likely Soviet reactions?

GLOSSARY

ICBM	Intercontinental Ballistic Missile
INF	Intermediate-Range Nuclear Forces

IRBM	Intermediate-Range Ballistic Missile
MIRV	Multiple Independently Targetable Reentry Vehicle
RV	Reentry Vehicle
SLBM	Submarine-Launched Ballistic Missile
SNDV	Strategic Nuclear Delivery Vehicle
SSBN	Ballistic Missile Submarine, Nuclear-Powered

BACKGROUND AND POLICY ANALYSIS

Strategic arms control has been an ongoing process since the beginning of the SALT negotiations in 1969. The first fruit of these negotiations was the so-called SALT I agreement (1972), in reality a dual agreement consisting of: (a) the ABM Treaty, which, with its associated 1974 protocol limits the U.S. and the U.S.S.R. to one anti-ballistic missile system each with 100 launchers; and (b) an Interim Agreement, which set ceilings on the aggregate number of ICBM and SLBM launchers for both powers (1,710 for the United States; 2,348 for the Soviet Union).

SALT I was controversial, in and of itself, in terms of the negotiating techniques used by the Nixon Administration, especially by Henry Kissinger; the disparity in the number of launchers in favor of the Soviet Union (offset by a U.S. advantage in warheads because of MIRV -- Multiple Independently Targetable Reentry Vehicles -- technology employed by the U.S.); and subsequent issues surrounding Soviet compliance and U.S. verification.

Despite these issues, both powers entered into a second phase of negotiations, which resulted in the SALT II treaty, signed in June 1979. Unlike its predecessor agreement, SALT II set ceilings on the overall inventory of strategic arms (2,250 launchers, which would have reduced Soviet launchers significantly, U.S. launchers minimally), [illegible] well as sublimits in specific categories of weapons -- overall numbers [illegible] launchers and MIRVed ballistic missiles. Also, SALT II included restrictions on qualitative improvements in strategic systems.

Although considered by the Senate Foreign Relations and Armed Services Committees, SALT II became embroiled in other issues, including the presence of a Soviet brigade in Cuba and the Soviet invasion of Afghanistan. This last issue proved to be most significant, as it led President Carter to ask the Senate to suspend consideration of SALT II pending resolution of the Afghan situation. This suspension has continued since President Carter's request in January 1980. The SALT I Interim Agreement had expired before the negotiations for SALT II were complete, but the U.S. and the U.S.S.R. declared they would continue to abide by its terms. After the U.S. suspended consideration of SALT II, it stated publicly that it would not take actions which would prejudice future compliance with SALT II as long as the Soviets exercise similar restraint. The Soviets are also reported to have adopted a similar position on SALT II, although they have not made any public declarations concerning their compliance.

The Reagan Administration came into office highly critical of SALT II, and has not requested that the Senate resume consideration of that agreement. However, it has not changed U.S. policy concerning compliance with SALT II. At the same time, the Administration has not resumed negotiations with the Soviet Union, although the President has announced a different tack, renaming the talks START -- Strategic Arms Reduction Talks -- thus emphasizing reductions rather than limitations. However, the Administration is widely perceived to have taken a long time to complete its preferred negotiating position before resuming the talks, which the President now hopes to begin by the end of June.

The Administration's delay in announcing a strategic arms control proposal left a void that proponents of a nuclear freeze in both Congress and at the grassroots level sought to fill. Congressional action on the nuclear weapons freeze issue intensified in March 1982, with the introduction of a myriad of freeze-related resolutions, the most well known being S.J.Res. 163 (Kennedy-Hatfield) and S.J.Res. 177 (Jackson-Warner). The House counterparts of these resolutions are H.J.Res. 433 (Markey) and H.Con.Res. 297 (Carney), respectively.

The Kennedy-Hatfield resolution calls for an immediate freeze on the testing, production and deployment of nuclear weapons and their delivery vehicles. The Jackson-Warner resolution calls for a freeze at "equal and sharply reduced levels." President Reagan has endorsed S.J.Res. 177. The basic difference between these two resolutions is the perception of the strategic balance they embody. Advocates of the Kennedy-Hatfield resolution believe there is rough parity, therefore now is the time to initiate a freeze. Conversely, proponents of the Jackson-Warner approach believe the Soviet Union has advantages in key areas that must be rectfied before a freeze is enacted. In addition to these two resolutions, there are many resolutions which are variations on the freeze idea, resolutions which call for specific reductions, as well as resolutions calling for compliance with or ratification of SALT II.

Congressional Action

The Senate Foreign Relations Committee held hearings on these resolutions during the end of April and beginning of May, and reported out an original joint resolution. This resolution commends the Reagan START proposal, and calls for sharp reductions to equal levels of ICBMs, SLBMs, and their warheads. It also calls on the U.S. to refrain from undercutting SALT I or II. The new resolution passed the committee by a vote of 12-5 on June 9, 1982. This resolution does not mention a "freeze," and has been interpreted as favorable to the Administration.

On June 23, 1982, the House Foreign Affairs Committee passed an original joint resolution, H.J.Res. 521, by a vote of 28-8. This resolution urges that START result in a "mutual, verifiable freeze on the testing, production and further deployment of nuclear warheads, missiles, and other delivery systems," and then proceed to "substantial, equitable and verifiable reductions." The resolution also states that the U.S. "shall promptly approve the SALT II agreement provided adequate verification capabilities are maintained."

The passage of H.J.Res. 521 is the first legislative success for those supporting the freeze concept. However, the ultimate passage of the joint resolution by both Houses remains in doubt given the resolution favored by the Senate Foreign Relations Committee.

Reasons for Growing Public and Congressional Concern

The initial impetus for congressional nuclear weapons freeze initiatives has come from a grassroots movement which has grown dramatically over the past several months. The main force behind this movement appears to be a growing realization of the dangers of nuclear war and a belief that the likelihood of such a war is increasing, perhaps related to the absence of strategic arms negotiations.

The roots of the nuclear freeze movement in the United States can be traced to Massachusetts, where Randall Forsberg, founder and director of the Institute for Defense and Disarmanent Studies, wrote a memorandum in 1980 entitled "Call to Halt the Nuclear Arms Race," which has become the fundamental document of the freeze movement. The memorandum puts forth a freeze proposal, calling on the United States and the Soviet Union to freeze the testing, production and deployment of nuclear weapons and their delivery systems. This has become the basis for various freeze resolutions adopted across the country.

The freeze movement has spread significantly since initial referenda were passed in state senatorial districts in western Massachusetts in Nov. 1980. According to the Nuclear Weapons Freeze Campaign's National Clearinghouse, organized freeze efforts are ongoing in 50 states and a majority of congressional districts. Numerous New England town meetings, various city councils and seven state legislatures have passed freeze resolutions to date. Campaigns are also underway to put freeze resolutions on state ballots for the 1982 elections.

In addition to the general concern over the effects and likelihood of nuclear war, other concerns have apparently played a role in the freeze movement. One is the size and scope of President Reagan's defense build-up, which represents the largest peacetime defense increase in real terms, and specifically marks funds for an array of strategic improvements or modernizations. Some critics find these plans incompatible with sincere arms control efforts. Concern has also been expressed by some over comments by members of the Administration about limited and survivable nuclear war. Finally, some concern has also focused on the size of the defense budget versus curtailed domestic programs, and also the potential relationship between defense spending and the large estimated Federal deficit.

A final factor which may have influenced the U.S. movement is the recent wave of anti-nuclear demonstrations in Western Europe. While these demonstrations were largely against the deployment of intermediate range nuclear forces in Europe, the general concerns were similar, and there may have been some spill-over effect in the United States.

Effects on the Defense Budget and the Budget Deficit

As noted, concern over the size of the proposed defense budget ($258 billion Total Obligational Authority, $215 billion outlays for FY83, with a 5-year projection of $1.6 trillion) and the large projected deficit are factors which may be prompting support for some of the freeze/moratorium proposals. Some proponents argue that if the strategic component of the defense budget were eliminated by a freeze this savings could be translated into a direct reduction of the budget deficit for FY83. The Reagan Administration now calculates that FY83 deficit to be around $101.9 billion; the CBO baseline projection is $182 billion.

However, the FY83 request for budget authority for strategic forces is $23.1 billion, of which at least $14.47 billion would be affected by a freeze. Thus, for FY83 the savings within the defense budget, or as a sum free to be applied against the deficit, would be significant but quite limited. The amount of money freed up by a freeze would be substantial over the course of the entire Reagan strategic modernization program. The total projected cost, FY82-FY87, would be $180.2 billion (in constant FY82 dollars), not all of which would be affected by a freeze.

Effects on the Reagan Strategic Force Modernization Program

On Oct. 2, 1981, President Reagan announced a program to modernize and upgrade U.S. strategic forces. The overall purpose of the program is to overcome perceived vulnerabilities and shortcomings and to improve the survivability of U.S. forces, thus maintaining their capability as a deterrent. There are five major elements to the program: manned bombers, MX basing, command systems (C3), submarines, and strategic defense. [For more detail see MB 81254: The Reagan Plan for U.S. Strategic Forces: Issues for Congress.]

Of these five elements, for at least three -- manned bombers, MX basing and submarines -- growth and modernization would be suspended by the proposals for a freeze. Some strategic defense programs involving nuclear weapons would also be included. President Reagan opposes the proposals for a freeze at current levels, arguing that this would deny the U.S. any opportunity to close the "window of vulnerability" (discussed in next section). The proposal which the President has endorsed, H.Con.Res. 297 (Carney), S.J.Res. 177 (Jackson-Warner), would implement a freeze only after mutual reduction to equal levels, allowing the U.S. to pursue these new strategic programs pending the outcome of negotiations. Critics note that at the same time the Soviet Union would also be free to continue its strategic arms growth, thus making reductions more difficult. However, given the President's endorsement of this proposal it would appear that the freeze concept itself has become less of a debating issue than the sequence of implementation, i.e., freezing now and then seeking reductions, or freezing once reductions are achieved.

Elements of the Reagan strategic program have also encountered opposition in Congress not related to arguments on freeze proposals. On Mar. 23, 1982, the Senate Armed Services Subcommittee on Strategic and Theater Nuclear Forces voted 9-0 not to fund manufacture and silo deployment of the MX missile until the Administration decides on a suitable basing mode. The full committee endorsed this position on Mar. 29, 1982. Other programs, such as the B-1 bomber and two Trident submarines, may also face some congressional opposition.

Effects on U.S. Strategic Forces and the U.S.-Soviet Balance

Much of the debate over the various freeze proposals centers on the perceived strategic vulnerability of the U.S. and the nature of the current strategic balance.

The most often discussed term is the "window of vulnerability," i.e., the vulnerability of U.S. strategic forces based on certain Soviet strategic weapons capabilities. The exact meaning of this vulnerability has become uncertain in recent weeks. The usual description of the "window" is that the Soviet MIRVed ICBMs present the danger of a potentially successful Soviet first strike against U.S. ICBMs, while leaving the Soviets with a sufficient second strike or residual forces to deter a U.S. counterattack. Critics of this perception have countered that even in such an instance the U.S. would have sufficient residual forces -- manned bombers and SLBMs -- that could retailiate against Soviet targets. Those who feel that the "window of vulnerability" is a credible threat respond in turn that these remaining U.S. forces do not have the accuracy of ICBMs to attack hardened military targets, leaving the U.S. in the position of having to attack Soviet cities rather than military targets, inviting Soviet retaliation in kind. The main concern is perhaps less over an actual Soviet attack than that this capability could be translated into political leverage against the U.S. and its allies.

However, in his press conference of Mar. 31, 1982, President Reagan stated that the Soviet advantage lies in their ability to absorb a U.S. retaliatory strike and then strike at the U.S. a second time. This is a different formulation than the first strike concern, and has prompted criticism, even from some who give credence to the "window of vulnerability" hypothesis.

There is no definitive solution to the vulnerability issue, which remains, in part, a perceptual argument. Furthermore, asymmetries in the U.S.-Soviet force structure make direct comparisons difficult. In broad terms, the U.S. has current advantages in ICBM accuracy, potential SLBM accuracy with the Trident D-5 missile, and in the total number of warheads. The Soviet Union has an advantage in the total number of launchers, particularly ICBMs with large throwweights (i.e, the amount of payload the missile can carry, roughly translatable into a larger number of warheads), overall throwweight capabilities and the related number of MIRVs per ICBM, and megatonage (total destructive power) in their ICBM force. The Soviets also have an advantage in that their force has been modernized more recently, which could be important in a freeze as it would mean that U.S. systems would be more susceptible to uncertainties brought on by aging. A freeze at current levels would make more permanent these relative advantages and disadvantages. Given the fact that each of the freeze proposals is dependent on successful negotiations, the chance of implementing a freeze before reductions depends on the willingness of both parties to accept the advantages and disadvantages of the current asymmetrical balance. Similary, a freeze after reduction would have a greater chance of success if both powers were willing to accept first force structures of more comparable composition.

Monitoring a Freeze

An important concern in all arms control proposals is the ability of the parties involved to monitor compliance successfully. Monitoring is the first technical step in the verification process.

To a certain degree verification requirements have been as much a determinant in the shaping of arms control agreements as they have been safeguards after implementation. SALT I, and to a large extent SALT II, set limits on the number of launchers rather than weapons as the deployment of launchers is more easily monitored and counted by national technical means. However, the major freeze proposals would also include limitations on the production and testing of weapons as well as their deployment. This imposes monitoring requirements far beyond those under SALT I and II.

Of the three major attributes being frozen, deployment is presumably the easiest to monitor and adequately verify by national technical means, given the types of noticeable activity associated with weapons deployment. Testing of entire systems (i.e., launch, separation of RVs and their reentry), is also readily monitored. However, testing at the component level has been and remains a serious problem, although component testing does not allow the same confidence in the reliability of a weapon system to be achieved. Therefore, while monitoring is more difficult, the potential for a military threat arising from undetected component testing activity is also lessened. Some problems could be encountered in ambiguities between military missiles and missiles used for peaceful, i.e., scientific, purposes.

Production, regardless of the level of reliability of the system, is also difficult to monitor, especially if the weapons are not moved to launch sites or are produced near launch sites. This could be a potential problem with Soviet SS-17 and SS-18 missiles, which are "cold launched," i.e., in which the missile is fired above the silo, thus leaving the silo reusable for a new missile. However, the time required for a successful launch, reload and second launch remains in dispute.

One suggested means around some of these monitoring problems has been on-site inspection (OSI). This concept has often been resisted by the Soviet Union and would need to be worked out in detail. ACDA Director Eugene Rostow has already expressed interest in "cooperative measures" in connection with the Reagan Administration's approach to strategic arms control, which emphasizes reductions rather than limits. Thus, it can be assumed that either major variant of the freeze proposals would impose new monitoring and verification requirements, some of which may fall short of adequacy in certain respects, or have, in the past at least, been unacceptable to the Soviet Union.

Effects on U.S. Negotiating Position in INF and START

The United States is already engaged in talks with the Soviet Union on the reduction of intermediate range nuclear forces (INF) in Europe and hopes to begin START (Strategic Arms Reduction Talks) in the summer of 1982. Administration officials have expressed concern that these various resolutions will adversely affect these negotiations. This argument is made on two grounds. First, some major freeze proposals would include INF and strategic forces, thus combining those two talks and, according to the Administration, adding to their complexity. (Two other resolutions, H. J. Res. 443 (Zablocki) and S.J.Res. 171 (Percy), specifically call for the strategic arms and INF talks to be combined.) Second, the Administration argues that the proposals for a freeze first limit the flexibility of the U.S. position in any negotiations, in part by giving the Soviet Union an idea of what Congress is most likely to accept, or perhaps by encouraging the Soviets to appeal directly to Congress and the U.S. public during the course of negotiations. Administration spokesmen point out that there can be no similar pressure effectively exerted on the Soviet government.

A third argument advanced by the Administration is the need to proceed with the strategic force program while also pursuing negotiations in order for the U.S. to have as strong a negotiating position as possible and to give the Soviets incentive to negotiate. As noted, this position has been attacked by advocates as fallacious, and some critics argue that building weapons as "bargaining chips" wastes resources or makes reductions more difficult.

Soviet Reactions

Since the introduction of S.J.Res. 163 (Kennedy-Hatfield) on Mar. 10, the Soviet press has given extensive coverage to the U.S. nuclear freeze movement. The two main themes of this coverage have been praise for proponents of a freeze of this type and criticism of the Administration for not accepting it. Advocates of a nuclear freeze are portrayed as people "really concerned about the future of all mankind" (Moscow Viewpoint, Mar. 28, 1982) and critical of the Reagan defense policy "that faces the world with the threat of nuclear catastrophe" (Pravda, Apr. 5, 1982). The Soviets cite disagreement with Administration policy as the driving force behind the freeze movement and detail polls which show the declining popularity of the Administration in this area.

The first official Soviet endorsement of a nuclear weapons freeze came on May 18 during a speech by Soviet President Brezhnev to the Komsomol Congress. Brezhnev responded to President Reagan's May 9 START proposal by proposing a U.S.-Soviet freeze on strategic armaments to take effect "as soon as the talks [START] begin." He added that modernization of such weapons should be "limited to the utmost." Brezhnev claimed that a freeze was significant both in its own right and also as a way to facilitate reduction of strategic arms. The Soviets have specifically rejected the premise of the freeze proposal which President Reagan has endorsed (S.J.Res. 177 (Jackson-Warner) and H.Con.Res. 297 (Carney)), which they claim would allow the U.S. to continue its strategic force modernization program (Moscow World Service, Apr. 2, 1982).

LEGISLATION

H.J.Res. 521 (Zablocki et al.)

States that START should result in a "mutual verifiable freeze" on testing, production and deployment, followed by "substantial, equitable and verifiable reductions," and that the U.S. approve SALT II. An original resolution, reported by the House Foreign Affairs Committee, 28-8, June 23, 1982. (Only those bills on which some action has been taken are noted here. See printed Appendix for a tabular comparison of the various legislative proposals.)

CHRONOLOGY OF EVENTS

06/23/82 -- House Foreign Affairs Committee approved, 28-8, H.J.Res. 521, calling for a "mutual verifiable, ...substantial, equitable and verifiable reductions," and approval of SALT II by the United States.

06/09/82 -- The Senate Foreign Relations Committee reported out an original joint resolution, by a vote of 12-5, commending President Reagan's START proposal, calling for reductions to equal levels of missiles and warheads, and asking the U.S. not to undercut SALT I and II. The resolution does not mention a "freeze."

05/13/82 -- President Reagan said the United States would not undercut "existing strategic arms agreements" as long as the Soviet Union did the same.

05/18/82 -- Soviet President Brezhnev responded to President Reagan's START proposal by welcoming the desire to negotiate but criticizing the specifics of the proposal. Brezhnev proposed a U.S.-Soviet freeze on strategic weapons to take effect "as soon as the talks [START] begin."

05/09/82 -- President Reagan proposed a two-step reduction of strategic nuclear forces: (1) reductions of ballistic missile warheads to equal levels, with no more than half of the remaining warheads to be land based; (2) equal ceiling on other elements, including ballistic missile throwweight.

03/31/82 -- President Reagan called for reductions in nuclear arms and endorsed the Jackson-Warner-Carney freeze proposal.

03/16/82 -- President Brezhnev offered a moratorium on deployment of Soviet medium-range nuclear missiles in the European part of the Soviet Union.

11/18/81 -- President Reagan announced his "zero-option," calling for the elimination of all intermediate-range nuclear forces from Europe.

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APPENDIX

COMPARISON OF ARMS CONTROL PROPOSALS

PROPOSAL	FREEZE/ MORATORIUM*	INF/ STRATEGIC	SPECIFIC REDUCTIONS	NEGOTIATIONS	NEW SYSTEMS ALLOWED*
H.Res. 153 (Weiss)	Defers NATO deployment		Primarily INF; seeking limit on & halt to development of nuclear weapons	INF negotiations	
H.Con.Res. 7 (Fish)		Both	Immediate, by a % to be specified & subject to rigid inspection	Call for annual % reduction until all nuclear weapons eliminated	
H.Con.Res. 151 (Fish, Bingham) & H.Con.Res. 269 (Howard)		Both	Substantial, subject to rigid inspection	Conference for annual reductions until all nuclear weapons and production facilities eliminated	
H.Con.Res. 258 (Fenwick)		Both	Balanced, mutual & verifiable		
H.Con.Res. 270 (Markey)	All testing, production & deployment of missiles & new aircraft designed primarily to deliver nuclear weapons	Both			

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* NOTE: The terms Freeze and Moratorium are being used somewhat interchangeably in the current discussion of these proposals. With the exception of the Brezhnev INF Moratorium, which is conditioned against NATO deployments, all the Freeze/Moratorium proposals would not be unilateral, but would be subject to a US-Soviet agreement before being implemented. A proposal which does not call for an immediate freeze on all activities could allow continuation of planned strategic programs; only the Gore proposal specifies which new systems would be allowed.

PROPOSAL	FREEZE/ MORATORIUM	INF/ STRATEGIC	SPECIFIC REDUCTIONS	NEGOTIATIONS	NEW SYSTEMS ALLOWED*
H.Con.Res. 277 (Mavroules)	All testing, production & deployment of missiles & new aircraft designed primarily to deliver nuclear weapons	Both	Drastic reduction or elimination		
H.Con.Res. 280 (Bedell)	Ban on test or deployment of ICBMs or IRBMs with new lighter RVs than currently deployed, & on cruise missiles with multiple nuclear warheads. Limit INF to either current US or Soviet force, subject to future reductions	Both	Down to 1125 SNDVs, with sublimits of 660 MIRVed launchers; 600 MIRVed ballistic missiles; 410 MIRVed ICBMs. Reduction in INF of 50% by 1990; 25% by 1992; total elimination by 1994	To achieve desirede-reductions	
H.Con.Res. 287 (Jeffords)	Testing, production & deployment of nuclear warheads, missiles & other delivery systems	Both	Pursue major mutual & verifiable reductions after freeze	To achieve freeze & major reductions	
H.Con.Res. 295 (Broomfield)		Both	Substantial, equal, verifiable & stabilizing	To achieve strategic arms reductions; also continue INF talks	
H.Con.Res. 297 (Carney)	Freeze once US & USSR reach equal & reduced levels	Both	Mutual & verifiable	To achieve desired reductions	

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PROPOSAL	FREEZE/ MORATORIUM*	INF/ STRATEGIC	SPECIFIC REDUCTIONS	NEGOTIATIONS	NEW SYSTEMS ALLOWED*
H.Con.Res 305 (Neal)	Ban deployment, possession or development of nuclear weapons	Both		Disposal of all nuclear weapons by nations possessing them or potentially capable, and to achieve proposed ban	
H.Con.Res. 339 (Gore)		That the President notify Congress before any action is taken that does not conform with the SALT II agreement			
H.Con.Res. 351 (Horton)	Moratorium on testing, production & deployment of nuclear warheads	Both		Between US, USSR & ultimately other W. European nuclear powers, to reduce all nuclear warheads to equal, verifiable levels, regardless of their deployment or delivery system	
H.Con.Res 358 (Porter)	Testing, production & further deployment as an outcome of START	Both	To equivalent levels, beginning with ICBMs	START, resulting in deep cuts to equivalent levels & a mutual, verifiable freeze	Continued productio & deployment as necessary for national security, consisten with poli of not undercutting SALT II
H.J.Res. 433 (Markey) & H.J.Res. 434 (Conte)	Testing, production & deployment of nuclear warheads, missiles & other delivery systems	Both	Pursue major mutual & verifiable reductions after freeze	To achieve freeze & major reductions	

PROPOSAL	FREEZE/ MORATORIUM*	INF/ STRATEGIC	SPECIFIC REDUCTIONS	NEGOTIATIONS	NEW SYSTEMS ALLOWED
H.J.Res. 443 (Zablocki)	Seek to avoid testing & development of new & destabilizing nuclear weapons. Preserve present limits & controls	Both	Equitable & verifiable	Begin START; incorporate INF into START	
H.J.Res. 476 (Lent)	Testing, production and deployment of nuclear warheads, missiles & other delivery systems	Both	Pursue major mutual & verifiable reductions after freeze; eventually eliminate all nuclear weapons	To achieve freeze using national technical means & onsite inspections, & to achieve major reductions	
H.J.Res. 474 (Downey)		That the Congress hereby approves the SALT II agreement			
H.J.Res. 521 (Zablocki et al.; passed House For. Affrs. Cmte., 6/23/82)	Testing, production and further deployment as an outcome of START	Both; also prompt US approval of SALT II	Substantial, equitable & verifiable, through ceilings, annual % reductions or other means	Begin START; incorporate INF into START	
H.R. 6636 (Lewis)		Both		Bans economic assistance to Warsaw Pact nations Soviet Union signs a nuclear arms limitation agreement	
S.Exec.Res. 5 (Biden)		That SALT II be reported to the Senate by July 1, 1982			

PROPOSAL	FREEZE/ MORATORIUM*	INF/ STRATEGIC	SPECIFIC REDUCTIONS	NEGOTIATIONS	NEW SYSTEMS ALLOWED*
S.Exec.Res. 6 (Hart)		That SALT II be reported to the Senate within 30 days for consideration			
S.Res. 323 (Hart)		Strategic	Sizable, mutual & verifiable	To achieve desired reductions	
S.Res. 343 (Mathias)		Strategic		Strategic Arms	
S.Res. 370 (Glenn)	Freeze within SALT II limits on testing, production and deployment of strategic weapons through 1985	Both	To SALT II limits within 1 year; reductions to be balanced & verifiable	To achieve reductions and freeze; to continue INF talks; to involve other nuclear powers; and to prevent proliferation	
S.Res. 391 (Mathias)		During the START negotiations, the U.S. should not act in any way that contravenes the terms of SALT I & II, provided the U.S.S.R. does the same			
S.Res. 407 (Garn)				The US and USSR should begin START in order to attain reduced & equal nuclear arsenals	

PROPOSAL	FREEZE/ MORATORIUM*	INF/ STRATEGIC	SPECIFIC REDUCTIONS	NEGOTIATIONS	NEW SYSTEMS ALLOWED*
S.J.Res. 163 (Kennedy, Hatfield)	Testing, production & deployment of nuclear warheads, missiles & other delivery systems	Both	Pursue major mutual & verifiable reductions after freeze	To achieve desired reductions	
S.J.Res. 171 (Percy)	Seek to avoid testing & development of new & destabilizing nuclear weapons. Preserve present limits & controls	Both	Equitable & verifiable	Begin START incorporate INF into START	
S.J.Res. 177 (Jackson, Warner)	Freeze once US & USSR reach equal & reduced levels	Both	Mutual & verifiable	To achieve desired reductions	
S.J.Res. 191 (Cranston)	Freeze on current arsenals, initially through mutual ban on production of weapons grade uranium & plutonium	Both	Phased, with weapons-usable material to be controlled by the Intl. Atomic Energy Agency	To achieve freeze and reduction	
S.J.Res. 198 (Hart)		That the U.S. shall continue to abide by SALT II so long as the U.S.S.R. does the same			
Gore Proposal (Cong. Record, 3/22/82)	US suspends deployment of M-X & Trident D-5; USSR suspends fractionation of current or planned ICBMs	Strategic	All MIRVed ICBMs eliminated by 1996	To achieve desired reductions	Deployment of 1 new single RV ICBM, up to a total of 1080; 1 new MIRVed SLBM & ICBM, tested but not deployed

PROPOSAL	FREEZE/ MORATORIUM*	INF/ STRATEGIC	SPECIFIC REDUCTIONS	NEGOTIATIONS	NEW SYSTEMS ALLOWED
Reagan Strategic Arms		Strategic	Reduction in 2 phases: (a) ballistic missile warheads to equal levels at least 1/3 below current levels, with no more than 1/2 the remaining warheads to be landbased; (b) equal ceiling on other elements of strategic forces, including ballistic missile throwweight	To achieve desired reductions	
Brezhnev Freeze Proposal	Freeze on strategic armaments as soon as START negotiations begin	Strategic			
Reagan Zero Option		INF	All US & Soviet INF missile systems reduced to zero	Current INF talks at Geneva	
Brezhnev Moratorium	Unilateral suspension of INF deployments at current levels, including SS-20s, but lasting only until NATO begins "practical preparations" for INF deployments	INF	Soviet position at Geneva (not part of the Brezhnev proposal) calls for a phased INF reduction to 600 systems by 1985, 300 by 1990	Current INF talks at Geneva	

Current
Policy No. 354

Nuclear Cooperation and Nonproliferation Strategy

December 1, 1981

United States Department of State
Bureau of Public Affairs
Washington, D.C.

Following is an address submitted to the annual conference of the Atomic Industrial Forum in San Francisco, California, by James L. Malone, Assistant Secretary for Oceans and International Environmental and Scientific Affairs, on December 1, 1981.

Today I would like to review for you the progress of the Administration's nuclear cooperation and nonproliferation policy since President Reagan's July 16 general statement on this subject. I know that most of you are familiar with that document and have followed closely the speeches and policy statements of other Administration representatives over the past several months. Therefore, I felt that, after some brief general comments on the principles that are guiding our approach, it would probably be most useful at this point for you to have a preliminary report on a number of the specific cases with which we have been dealing and to hear how the Administration believes each individual case fits into its overall policy framework.

The past year has been an exciting time for those of us who have been involved in the evolution of a new American strategy on nuclear cooperation and nonproliferation. One result of our efforts has been the initiation of a heightened level of exchange between nuclear industry and the government. This is something that we will need to pursue and strengthen from both sides. For our part, we recognize that national and world public opinion about our policies will make a decisive contribution to their success or failure. Public judgment will be formed in the first instance by a process of debate and discussion among those, like you, who have a special knowledge of, and involvement in, these issues. And we also recognize that, for the success of its decision-making process, the nuclear industry of the United States must be confident that it has a solid understanding of the direction of its government's nuclear policies.

Principles Guiding U.S. Approach

At the outset I want to lay to rest one possible misperception, entertained in some quarters, of the bottom line on U.S. nonproliferation policy. It is, of course, true that we intend to enhance the international competitiveness of U.S. nuclear exports by all appropriate means. Assisting U.S. firms to compete on a more equal, nondiscriminatory basis with nuclear suppliers from other countries in meeting peaceful nuclear power needs is not only a legitimate activity of any U.S. administration, it is one to which the present occupant of the White House has directed the urgent attention of the several agencies involved.

It is also true that, in contrast to the uniform approach that held sway previously, our approach will be a more differentiated one. It was, perhaps, natural that over the years there arose a tendency in U.S. nonproliferation and nuclear export policy to seek to treat all customers alike and to expect that the inflexible and nondiscriminatory rule of law that guides our affairs at home could somehow be universally applied to regulate our decisions on nuclear exports. Of course, in the real world, it turns out that potential customers for our nuclear exports are characterized by an extreme disparity in their nonproliferation merit and run the gamut from those countries whose sense of responsibility on this issue is no less than our own to those with whom we could not consider nuclear cooperation at all. It is precisely this diversity that our new policy is designed to recognize in full.

However, it is most definitely not true—and this is a point to which I particularly want to draw your attention—that the Reagan Administration is less concerned than its predecessors about the threat of nuclear proliferation. There is no more terrifying prospect than that nuclear arms might one day be in the hands of a government that would seek its desperate ends by using them. The imperatives of our own security on this score are self-evident: For the United States there is no alternative to a full commitment to preventing the further spread of nuclear weapons.

In our bilateral discussions on matters of nuclear commerce and nonproliferation—which I will examine in more detail shortly—it has been clear to our counterparts from other countries that the Reagan Administration's orientation on this critical issue extends forward the straight line of American policy concern that goes back to the beginning of the atomic age. In our confidential diplomatic exchanges, the concrete direction of our policy is necessarily more fully and candidly revealed than in public statements by government officials. It should be evident to those who keep a close watch on the public results of such meetings and who can read carefully between the lines that there is no indication from this quarter that the United States may be dropping its guard or relaxing its concern about the need to avert nuclear proliferation. Quite the contrary.

While our concern is in no way diminished, our approach, as you know, has been significantly altered in several regards. A few moments ago, I mentioned our intention to reestablish the competitiveness of American nuclear exports. Maintaining the economic health of this major industry is in itself a very important objective, both for the domestic energy role the industry must be in a position to play over the next decades and for the overall contribution we need it to make to the economy with regard to jobs and our balance of trade.

But the really decisive consideration is the fact that, in order to influence the development of nuclear energy around the world, in order to insure that that development is proliferation safe, we must be a leading participant in it. If we are not, not only do we risk the progressive atrophy of this country's technological capabilities, the loss of jobs at home and the weakening of our payments position, we also risk that countries will go their own ways in matters of nuclear development to the detriment of our nonproliferation objectives. U.S. leadership has played a key role in raising international awareness about nuclear proliferation and in helping to create a system that is able to give governments a real measure of confidence that their neighbors are not building nuclear weapons. It is important to realize that the critical factor in enabling the United States to make such a contribution has not in the first instance been the correctness of our position but rather the influence we were able to muster by virtue of our role as a technology and trade leader in international nuclear commerce.

Unfortunately, there is a recurring tendency to turn away from the complex and difficult burdens of involvement—to adopt an above-the-battle stance in which the United States is more concerned with insuring that its own hands are clean than with coping with the threat of proliferation as it exists in an often messy and complex world—but in the long run we have inevitably found such an attitude to be unrealistic. The Reagan Administration's nuclear export policy is a return to realism.

With the foregoing description of our policy's conceptual basis in mind, I would now like to turn to a review of several of the specific country-related issues that have been prominent on our agenda over the past months.

Country-Related Issues

Japan. A number of years ago the Japanese—with an eye, no doubt, to their future energy security and in keeping with their desire to be in the forefront of technological development—decided to construct a pilot-scale nuclear reprocessing plant at Tokai-Mura. However, before completion of the plant, U.S. views concerning the reprocessing of spent nuclear fuel had undergone significant change. In 1977, as the Tokai reprocessing facility was ready to start operation, the United States was engaged in a full-scale effort to discourage reprocessing worldwide. Just at that time the Japanese were seeking U.S. consent, in accordance with our agreement for cooperation, to reprocess U.S.-origin spent fuel in their new facility.

The result was a sharp disagreement between the two governments. At one point, the then Prime Minister of Japan characterized the Tokai-Mura issue as the most disturbing element in U.S.-Japanese relations. But, given the overall closeness of U.S.-Japanese interests and the strength of Japan's nonproliferation credentials, a compromise was ultimately reached that allowed Japan to process up to 99 metric tons of U.S.-origin spent fuel over a 2-year period. This agreement was subsequently extended and augmented to permit operation of the plant through the end of October of this year. The Tokai-Mura issue was thus one of the first that the new Administration had to face.

In July the President announced that the United States would not seek to inhibit reprocessing of spent reactor fuel in countries with advanced nuclear power programs and where it did not create a proliferation risk. With the President's new policy in mind, we were able to negotiate a new arrangement with the Japanese before the end of October. It will enable Japan to operate the Tokai facility through the end of 1984 and to reprocess U.S.-origin spent fuel up to the annual design capacity of the plant.

Japan's impeccable nonproliferation credentials and the special contribution it has made, in cooperation with the International Atomic Energy Agency (IAEA), to developing new techniques and instrumentation to advance the safeguardability of reprocessing plants make it clear that Japan meets the standards set forth by President Reagan. The arrangements we reached with Japan take full account of our proliferation concerns while at the same time demonstrating that the United States will be a reliable partner in its nuclear commerce with nations which include our most valued friends and allies.

Switzerland. One of the most important and illustrative developments of the past several months was the decision to approve two pending Swiss requests to retransfer a total of approximately 40 metric tons of spent fuel for reprocessing in France. The handling of these "subsequent arrangement" cases is not only indicative of our announced intention to approve requests like these from Switzerland but also of our commitment to act expeditiously so that our trading partners will be able to make reliable long-term plans and projections.

In this context, where we are endeavoring to reestablish an American reputation as a predictable and punctual contractual partner, we have begun to see signs of renewed interest on a governmental level in nuclear cooperation with the United States. With **Sweden**, for example, we hope soon to move to reopen discussions on exploring a basis for amending the nuclear cooperation agreement between the two countries. And we expect shortly to sign and then submit for congressional consideration the draft of a similar agreement that the United States and **Norway** have initialed.

Mexico. As you know, Mexico is currently making great strides in economic development and is playing an increasingly important role in this hemisphere and in the world, especially with regard to international trade and energy. In agriculture, for example, our two countries provide each other with significant quantities of a number of products to the considerable benefit of our respective populations. We look ahead to the continued development of the Mexican economy both as an expanded market for American products and as a supplier of a range of imports to the United States.

It seems to me that U.S.-Mexican relations are currently on a particularly good footing and are based on a realistic respect for each other's accomplishments and interests. The close personal relationship between President Reagan and President Lopez Portillo has been a major element in our improved relationship.

Last week Secretary Haig was in Mexico for talks on a range of bilateral topics. The discussions, which included matters of nuclear cooperation, concerned ways in which the United States and Mexico could work together to maximize the benefit which we both draw from the especially close relationship of our two countries.

In nuclear matters, Mexico has established a solid cadre of scientists and technicians and maintains very high academic and research standards in the nuclear field. Moreover, the Mexican Government has made a farsighted decision to invest a portion of the revenues from its abundant petroleum resources in the long-range development of nuclear power.

For our part, we hope to be able to work together with the Mexicans to find ways to expand cooperation between our countries in the peaceful uses of the atom. And given this Administration's commitment to domestic energy independence, to removing impediments to the long-term expansion of nuclear power, and to encouraging the general health of the U.S. reactor industry, I believe that the United States will be perceived as an attractive partner for cooperative programs that will stretch out to the end of this century. No foreign customer of ours is likely to face a situation some years down the road in which he ends up bearing the expense of subsidizing a nuclear industry whose modest domestic market has, in the meantime, largely dried up. In short, there today is ground for optimism that the United States and Mexico can look forward to a significant level of commerce in nuclear technology as well as in more traditional areas of trade.

During his visit there last week, Secretary Haig deposited our instrument of ratification of Protocol I of the Treaty of Tlatelolco—a step which had been long awaited by the Mexicans and other Latin American governments. Our ratification had been unanimously approved by the Senate in accordance with the request the President made in his July 16 statement. This action was a token of the deep interest we share with Mexico in keeping the region free from nuclear armaments.

Mexico has made a strong commitment to the cause of nonproliferation. We have now made an equally strong commitment to reestablishing the United States as an attractive and reliable competitor in this field and there thus seems to be no reason to prevent our reaching mutually satisfactory arrangements with the Mexicans that would allow U.S. firms a fair chance at participation in the Mexican program.

Although companies from a number of other countries are also interested in a share in the Mexican nuclear energy undertakings, a U.S. Government team in which I am participating will shortly be in Mexico to discuss nuclear cooperation matters. We will be able to present a strong brief in favor of U.S. involvement, for with its unequaled academic, research, and industrial resources in the nuclear area, and its government's comprehensive commitment to support of nuclear export initiatives like this one, I think the United States will be in a position to compete aggressively.

Brazil. The case of Brazil casts an informative light on the dynamics of the flexible approach we have adopted in such circumstances. Our objective has been to keep options open on both sides as we attempt to find equitable arrangements that would serve our nonproliferation goals while establishing a framework that would permit nuclear cooperation between the two nations.

The United States and Brazil entered into a bilateral agreement for peaceful nuclear cooperation in 1972. Brazil subsequently contracted with Westinghouse for the construction of its first power reactor, Angra I, and with the Atomic Energy Commission (more recently the Department of Energy) for enrichment of fuel for that reactor. A provision of the enrichment services contract called for a financial penalty if Brazil were to turn to another source for enrichment during the life of the contract.

In 1979 Brazil applied for an export license for the first fuel reload for Angra. Since then that license has remained pending while the two governments have been discussing the application of several export criteria established by the Nuclear Nonproliferation Act of 1978 and, in particular, the requirement that IAEA safeguards be maintained on all Brazilian nuclear activities.

The requirements of the Nuclear Nonproliferation Act were clearly intended in the first place to insure that exported U.S. materials were not misused and, beyond that, to encourage those who might want our exports to accede to a wide-reaching nonproliferation commitment. In other words, withholding of U.S. nuclear materials, equipment, and technology was intended as a lever to move other nations in our desired nuclear nonproliferation directions. But there is something important to keep in mind with regard to any leverage tool, especially when dealing with other sovereign nations: In order to use it effectively, you must know its limits.

For example, I have never been convinced that it is possible to reach a satisfactory conclusion to a process of negotiation with another country if you try to back the other party publicly against a wall. This is not to say that it is not proper for the United States to specify conditions for its exports. But it is to say that our export policy can be only one, ancillary inducement; there must be additional, publicly palatable reasons for a country's decision.

Given Brazil's need for fuel reload material on a timely basis to avoid interruption in the Angra reactor's operation and Brazil's reluctance, so far, to provide safeguards assurances beyond the scope of the 1972 bilateral agreement, it became evident that it would not be possible in the available time to resolve the complex safeguards issue and other aspects of our statutory requirements. At the same time it was judged that further efforts on both sides offered a worthwhile chance that agreement could eventually be reached between the two sides.

Under these circumstances the Department of State recommended that the prospects of reconciling the positions of the two parties would be best served by preservation of a nonconfrontational environment for our ongoing talks and that, therefore, Brazil should be permitted to obtain elsewhere the single fuel load now needed for Angra I without liability for the termination changes that the contract would otherwise have required. This decision was conveyed to the Government of Brazil by Vice President Bush during his recent visit there. We feel that it has created conditions conducive to continuation of good faith discussions between the two countries about the conditions under which a mutually beneficial and enduring nuclear supply relationship could proceed.

We have been guided in this situation by the need to be flexible in pursuit of our nonproliferation goals and by the conclusion that, in the final analysis, the real incentives for a country like Brazil to accede to a full-scope safeguards regime are likely to be similar to those that would apply to any nation in these concrete circumstances: a recognition that halting the spread of nuclear explosives and the preservation of Latin America as a nuclear-free region are squarely in Brazil's own national interests.

Egypt. The recent conclusion of an agreement for nuclear cooperation between Egypt and the United States is important for two reasons. First, it will open the door to participation by American firms in the plans of the Egyptian Government for peaceful nuclear development. The United States has a serious and long-term commitment to the economic development of Egypt. Therefore, we welcome the opportunity to extend our field of cooperative activity there to the development of the civilian uses of nuclear energy. We recognize that nuclear suppliers from other countries will also be competing for a share in Egypt's program, but I am confident that with regard to price, technological quality, and financial terms, U.S. companies will be in a position to make an attractive offer.

Second, and perhaps even more important, is the fact that this agreement for cooperation with Egypt demonstrates that the strictest nonproliferation arrangements can be adequately accommodated in an agreement that also provides fully for peaceful nuclear development. The example set by the United States and Egypt in this regard could be extremely important as a model for relations with other countries in this region and beyond. In this, as well as in other matters having significant implications for peace in the Middle East, the leadership of Egypt has again demonstrated its considerable sense of responsibility.

South Africa. The issue of fuel supply for the French-built reactors at Koeberg in South Africa has been much in the press lately. (In this connection, I was recently reminded that we often hear what we are predisposed to hear: Someone, apparently ready to believe the worst about the South African nuclear situation, was quoting the State Department Spokesman and printed it as "South Africa's *covert* reactors, instead of Koeberg reactors.") In any event, I would like to briefly review the South African case and bring you up to date on it.

Since 1974 the United States has had a contract to provide enrichment services for the Koeberg fuel, beginning this year. However, since 1975, the United States has not authorized nuclear fuel exports to South Africa.

The consistent U.S. position—and it is one that the Reagan Administration has reiterated—has been that the United States would not be able to engage in nuclear cooperation with South Africa unless that country adhered to the Nuclear Nonproliferation Treaty and accepted international safeguards on all its nuclear facilities.

Our objective has been to encourage South Africa to make a comprehensive nonproliferation commitment. Such a development would not only serve our overall, worldwide nonproliferation goals, it would have a specific impact in Africa. The United States believes that the international safeguards system of the IAEA provides the best available means for furnishing verifiable assurance that a country's nuclear activities are not being directed to weapons purposes. Bringing South Africa into such a system would make a real contribution to regional stability and the cause of nonproliferation.

Our policy in southern Africa is designed, both with regard to regional issues like Namibia and issues like the nuclear one, to work toward solutions that will defuse tensions on all sides and lead to a more relaxed perception for all parties that their long-term national interests are secure.

As part of our efforts, within the past several months the United States and South Africa have exchanged visits of working-level technical teams who have carried out an in-depth investigation of the application of safeguards to enrichment plants. This question has been a critical one since the objection to comprehensive international safeguards that has been most frequently put forward by the South Africans has been that the inspection process would pose a danger to the commercial integrity of their indigenously developed enrichment process. Though the future of our overall relationship in nuclear cooperation matters still remains unresolved at this point, good progress has been made on this question of safeguarding enrichment plants, and the United States certainly remains ready to proceed in good faith to work to resolve remaining problems.

Pakistan. The case of Pakistan touches closely on our nonproliferation policy, although the United States, of course, does not engage in nuclear cooperation with that country. As you know, the United States terminated all assistance, military and economic, to this long-time ally as a result of Pakistan's nuclear program—a program that was intended to put that country in position to develop nuclear explosives. However, our aid cutoff pursuant to the Symington amendment did not have the intended result of dissuading Pakistan from its pursuit of a nuclear weapons option.

But for the unprovoked Soviet aggression in Afghanistan, matters might have continued as they were, with Pakistan proceeding toward the testing of a nuclear device and our two countries fundamentally estranged over the issue. However, 2 years ago at the time of the Soviet invasion, it was immediately recognized that the situation had been fundamentally altered. It became necessary to attempt to address Pakistan's legitimate and urgent security concerns, most directly by assisting it to improve its conventional military capabilities. Those who argue that, in any event, Pakistan could never hope to counter a Soviet move against it, forget the lesson of Yugoslavia or, for that matter, the lesson of Switzerland in World War II. They also ignore the profound implications for our security of a Soviet attack on still another nation in this vital region of the world.

With this in mind the Reagan Administration moved decisively to work out an assistance package with the Government of Pakistan. We believe that this assistance—which is in the strategic interest of the United States—will make a significant contribution to the well-being and security of Pakistan and that it will be recognised as such by that government. We also believe that, for this reason, it offers the best prospect of deterring the Pakistanis from proceeding with the testing or acquisition of nuclear explosives. For we have left the Pakistanis in no doubt that such a move on their part would necessarily and fundamentally alter the premises of our new security relationship with them.

Australia. As many of you know, for some years Australia has been considering the acquisition of a uranium enrichment capability that would enable that country to take better advantage of its abundant natural uranium deposits. Australia is also a close friend and long-standing ally of the United States and has superb nuclear nonproliferation credentials. In fact, Australia has played an important role in international efforts to prevent the spread of nuclear weapons and has a very strict nuclear export policy. A number of advanced nuclear supplier countries are actively pursuing participation in this project which would, of course, involve sharing their enrichment technology with Australia.

In this context and after extensive study, the United States last month made a decision to offer U.S. enrichment technology to Australia if suitable arrangements can be worked out between us. It should be noted that any transfer of U.S. technology under such a program would naturally be subject to U.S. statutory requirements and safeguards and would be consistent with our overall nonproliferation policy.

While questions like the Australian one are examined on a case-by-case basis and should not be taken as setting a precedent applicable to other instances, it is nevertheless worth pointing out that to have foreclosed the opportunity to cooperate with Australia would not only have risked the general alienation of one of our closest friends and allies, it would also have tended to diminish our influence and ability to work together with the Australians on matters of nuclear proliferation concern.

Conclusion

Time will tell whether our action on Australia and in the other examples I have just presented will have borne fruit. For, even after almost a year in office, we must recognise that what we have done so far is only a beginning. Indeed, it could be argued—and here I return to some of the candor I promised—that toward its end the Carter Administration was already heading in some of the directions which we have followed. That, in fact, is entirely true—reality is an insistent teacher and eventually brings us all into line, one way or another—but I would submit that what matters is not only the isolated decision in itself but also the whole policy context in which it occurs. Often the question is not so much the direction indicated in a specific decision as the support and emphasis the decision receives from the overall orientation and consistency of an administration's policies.

In the wake of India's 1974 detonation it was understandable that the United States was impelled to impose strict controls on exports of sensitive nuclear materials, equipment, and technology. But, as I think most observers came to realize, we went too far when these restrictions extended to our closest allies and industrial partners and, as a result, we began slipping in terms of our nuclear industry's ability to compete at the international level. This is now being changed.

What has not changed is our commitment to a strict nuclear export policy when it comes to countries in unstable areas that are real proliferation risks. There is simply no alternative here, nor would we for a moment consider one.

But there is another, even more important point I have to make in this connection: At base, proliferation is a political problem. A given country, is not, in the first instance, a proliferation threat by virtue of advanced industrial and nuclear capabilities—by contrast many of the advanced industrial nations of the Organization for Economic Cooperation and Development could acquire nuclear weapons in short order if they so wished—but rather because its government has made a political decision to seek nuclear arms based on its perception of the national security situation it faces. In other words, it is not possible to address the proliferation problem exclusively in terms of seeking to restrict a potential proliferator's capabilities; there are just too many nations that, given the political will, can hardly be prevented from acquiring the necessary technological and industrial wherewithal in the long run.

So, while we will continue to follow a most restrictive export policy toward potential proliferators, we must add to that a realistic pursuit of similar restraint on the part of other nuclear supplier nations and, above all, a determination to address the underlying causes of insecurity that may motivate some nations to seek a nuclear weapons option in the first place. These latter two activities are the proper task of diplomacy and will inevitably require the patience and persistence to apply a strategy that is nonconfrontational, flexible, and often indirect in its means but uncompromising in its objective. ■

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Nuclear Common Sense

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Following is an address by Richard T. Kennedy, Under Secretary for Management, before the Atomic Industrial Forum in New York, March 22, 1982.

I would like to share with you this morning some of the thinking that has guided the Reagan Administration's approach to nuclear nonproliferation. In the course of the past year, we have continued to pursue two longstanding U.S. objectives: preventing the spread of nuclear weapons to additional countries and encouraging the use of nuclear energy for peaceful purposes. But we have tried to bring to that task nuclear common sense. Let me elaborate.

Since the dawn of the nuclear age nearly four decades ago, the United States has been firmly committed to the objective of preventing the spread of nuclear weapons. And just 15 years ago, that principle was embodied in the Nonproliferation Treaty, support for which has been a basic tenet of our foreign policy and a basic security interest of the world at large ever since—for uninhibited and continuing proliferation of nuclear weapons could only mean the end of world order as we know it. Thus, this Administration remains firmly committed to the goal of preventing the spread of nuclear weapons, a goal of every administration since the nuclear age began. This goal rests on the valid belief that the increasing spread of nuclear weapons around the globe would trigger many new dangers for American and global security and well-being.

There would be a danger, for example, that desperate leaders in high-stakes conflicts might not be deterred from nuclear blackmail or even the use of nuclear weapons to achieve their objectives. A conventional clash between hostile new nuclear powers in a conflict-prone region might escalate by accident or miscalculation to a local nuclear exchange. And the possibility could not be discounted that such a nuclear clash would threaten to involve the superpowers themselves. Moreover, the spread of nuclear weapons could make it easier for a terrorist group to steal or otherwise acquire a nuclear weapon to extort political concessions or funds.

Nuclear Energy for Peaceful Purposes

Preventing the spread of nuclear weapons, however, is not just in the interest of the superpowers. It is in the interest of all countries and regions. Indeed, it is the security of countries in the regions to which nuclear weapons might spread that would be most immediately affected. And the adherence to the nuclear Nonproliferation Treaty by more than 100 countries indicates that the vast majority of the world's nations recognizes clearly that prevention of the spread of nuclear weapons is essential to their security.

At the same time, the treaty recognizes the importance of making available to all nations the benefits of the peaceful uses of nuclear energy. We also are committed to encouraging and facilitating the use of nuclear energy for peaceful purposes.

President Reagan's October 8 policy statement made clear that this Administration intends to take a positive attitude toward, and to foster increased domestic reliance on, nuclear power without compromising public health and safety. We seek, for example, to lessen the regulatory impediments which have contributed to the reluctance of utilities to purchase new nuclear power plants. We have lifted the embargo on domestic reprocessing, and we are encouraging private sector involvement in this area. We are moving ahead with a demonstration of breeder reactor technology, including completion of the Clinch River breeder reactor. And we are expediting efforts to include the passage of needed legislation to put into operation facilities for waste management.

Looking abroad, it is clear that, while some opposition exists, many nations are committed to reliance on nuclear energy to meet an important part of their energy requirements. The countries of EURATOM and Japan already have advanced nuclear industries and rely to a considerable degree on electricity from nuclear power stations. And they are moving toward ultimate deployment of the breeder reactor. South Korea and Taiwan already are developing increasingly sophisticated nuclear infrastructures; Egypt and the Philippines are entering the nuclear energy world; and, closer to home, nuclear power is a major part of the energy programs of Brazil and Argentina, while Mexico is planning a major expansion of its ongoing nuclear program.

It is essential that the American nuclear industry play a role in this global nuclear energy future, just as it contributed to the initial development and worldwide deployment of nuclear power. There are those who argue that this is necessary because of the economic and technical benefits of maintaining a healthy U.S. nuclear industry. Contributions to a healthy balance of payments, more jobs, and tax revenues obviously are at stake. But I submit that the strong nonproliferation and security benefits flowing from such a role may be more important.

Because of our position as a leading supplier of nuclear goods, services, and technologies, we have been able to take the lead in global nonproliferation efforts. We were instrumental in creating the International Atomic Energy Agency (IAEA) in 1958, in launching the international safeguards system, and in fostering needed agreement on and continuing adherence to the London Nuclear Suppliers Guidelines. Our role as a major supplier also is vital to our current efforts to shape deliberations on assurances of supply and international plutonium storage, now being conducted under auspices of the International Atomic Energy Agency.

A Cooperative Approach

As we look over the decade ahead, the introduction of nuclear power to new countries and regions makes even more essential our direct involvement and participation. For if the United States fails to maintain its position as a leading nuclear exporter, other views on nonproliferation and safeguards will carry increasing weight in shaping global norms and practices; it is by no means certain that these views necessarily would be as strong and consistent as our own.

Thus, we are seeking to remove impediments to the nuclear industry's ability to compete on a fair and equal basis with the nuclear industries of other supplier countries. We also stand ready as a government to facilitate cooperation with other friendly countries, contributing our technology, materials, and know-how in programs appropriate to these countries' evolving energy capabilities and requirements. But let me add, however, lest I be misunderstood, that this Administration has no intention of shading its commitment to nuclear nonproliferation in pursuit of commercial gain.

Over the past year, various changes of approach have been evident in our nonproliferation policy. Previously, we relied to a major extent on a policy of technology denial. This was based on the near theological notion that use of nuclear power abroad was the driving cause of proliferation. But denial has not worked. Indeed, as Gerard Smith and George Rathjens wrote in *Foreign Affairs* last spring, the ". . . policy initiatives of recent years and the NNPA [Nuclear Non-Proliferation Act], have had little relevance to real proliferation problems." To deal with those problems, what we need now is not abstract debate about nuclear power but what I like to call nuclear common sense.

Common sense simply means seeing the world as it is, not as we might wish it to be. And if we look at the problem in this way, it seems clear that the United States should base its future nuclear nonproliferation policy on the fact that we no longer possess the dominant influence in the nuclear field—scientific or commercial—that we once enjoyed. As mastery of the technology has become more widespread, our ability to convince others to follow our lead, let alone to dictate their nuclear energy choices, has diminished.

We must turn away from the "unilateral" approach, therefore, which characterized our recent dealings with our nuclear partners and emphasize instead a "cooperative" approach—an approach in which we work together to reach agreement as to how our nuclear relations will be conducted. Continuation of "unilateralism" certainly would not help to achieve our nonproliferation goals. And it could sour our broader relations in areas beyond the nuclear sphere.

If we are to look at the world as it really is, we must be ready to treat different things differently, to make legitimate distinctions. In the past, there has been a tendency to lump all countries together—to treat all alike in an unrealistic, perhaps even patronizing manner. This led to rancorous and counterproductive disputes with the EURATOM countries and Japan. But both EURATOM and Japan have excellent, indeed unchallenged, nonproliferation credentials.

They recognize the need for restraint in exports of sensitive items; they have been supportive of efforts to develop international safeguards; they cooperate on other nonproliferation initiatives; and neither Japan nor the non-nuclear-weapons states in EURATOM intend to develop nuclear weapons. These are realities which will be reflected fully in our thinking about how to exercise U.S. consent rights in a manner consistent with the long-term nuclear planning needs of these countries.

Common sense also suggests that the level to which a country's nuclear power program has developed may be an important ingredient in defining the nature of our nuclear relations with it. President Reagan has said the United States will not inhibit civil reprocessing and breeder programs in countries with advanced nuclear programs where such activities will not comprise a proliferation risk. Yet, it is desirable to avoid premature commitment to reprocessing or breeder activity in countries with less sophisticated nuclear programs. We cannot and will not dictate the nuclear energy programs of other countries, but nor should we nor will we encourage advanced fuel cycle activities before they are warranted as a coherent part of an advanced nuclear program.

No one would deny that plutonium is a dangerous substance and that it must be carefully controlled. But wishing it away simply belies the facts. To deal with the world as it is, we must first acknowledge that plutonium is and will continue to be used as a nuclear fuel, even if the extent of that use remains uncertain. In EURATOM and Japan, plutonium fuel is believed by many to be more economical and needed sooner than may be the case in the United States. Breeder development, for example, is well advanced in France and continues to move forward in Japan. The United Kingdom continues its research, and in Germany the decision of German utilities to defray 20% of the cost of completing the Kalkar demonstration breeder signals their desire to keep this option open.

Rather than engaging EURATOM and Japan in theological discussions about the desirability of a so-called plutonium economy, we need to think seriously together with them about how to steer in the safest direction the manner in which reprocessing is undertaken and plutonium used. We need to design rigorous safeguards for such advanced nuclear activities, to try to restrict the actual reprocessing and other fuel cycle facilities to as few sites as possible to insure adequate physical security, and to be prepared to deal with problems of transportation of material and waste disposal. Cooperation in each of these areas will be critical, but such cooperation will not be fostered by talk of suspending nuclear exports to our friends and allies.

Causes Versus Symptoms

If we are to be guided by common sense, we must focus also on the underlying "causes" of a problem, rather than its surface "symptoms." Too often in the recent past, we have focused on the symptomatic aspects of proliferation, rather than its causes. We tried to rely on a policy of denying technological help, in the mistaken belief that such denial would assure that nuclear explosives could not be developed. Instead, we should concentrate on determining why the leaders of a nation might be motivated to move toward nuclear explosives development. It is clear that understanding those motivations, rather than focusing on technological capabilities alone, is the key to successful long-term nonproliferation efforts.

There are, for example, a number of highly developed industrial nations which could quickly produce nuclear explosive devices, if they thought that their national security interests demanded it. The fact that they have not done so has little or nothing to do with their technological capabilities. Rather it reflects the structure and content of their security relationships and the general political climate in which they find themselves.

This is not to say that there are no situations in which a strategy of technology denial is indicated or would be successful. There are such situations. Measures to delay the development of the technical capability to acquire nuclear weapons are a necessary part of U.S. nonproliferation policy. As President Reagan stated, the United States will seek to inhibit the spread of sensitive technology, facilities, and material, particularly where the danger of proliferation demands.

Nonetheless, I repeat, we cannot place our full reliance on a strategy of denial with any assurance of long-term success. Such a policy can buy time and perhaps in some cases substantial time. But we must use such time wisely. In particular, we must use that time for new initiatives by the United States and other countries to reduce those underlying motivations that may lead some countries to seek a nuclear explosive capability.

Steps to alleviate military and political insecurity are important and perhaps vital in our effort to lessen the motivation to "go nuclear." And we are taking such steps. The presence of strong and credible U.S. alliances has been critical throughout the postwar period to realizing our nonproliferation objectives, and they will remain so. Equally important are diplomatic initiatives to lessen regional instability and tensions, again using the time made available by technical steps to deal with the more fundamental political roots of proliferation.

Ways must also be found to reduce mutual suspicions on the part of neighboring countries about the longer term intentions of their potential rivals. Implementation of the Treaty of Tlatelolco in Latin America would contribute to that goal. With that fact in mind, the Administration successfully urged Senate approval of Protocol I of the Treaty of Tlatelolco. We would welcome a similar decision by France to ratify Protocol I. We also hope that those countries in Latin America that have not yet done so would see fit to adhere in their own interest and that of their neighbors. We have steadfastly urged countries, not yet parties, to join the Nonproliferation Treaty and are gratified at Egypt's recent accession. Adherence to the treaty can be a major step in reducing mutual suspicion.

The Safeguards Dimension

Acceptance of safeguards on all of its nuclear activities is another way a nation can give concrete expression to its nuclear good intentions. In the words of Director General Blix: "IAEA safeguards are measures through which the states, in the exercise of their sovereign will, rely upon an international organization to confirm through inspection that their actions conform to their stated intention not to acquire nuclear weapons." This requires, Dr. Blix continued, that "the verification procedures should not be cosmetic but convincing."

In assessing the effectiveness of these safeguards, however, common sense dictates that we be wary of the trap of letting "the best" become the enemy of the "good." The ongoing debates about the effectiveness of IAEA safeguards may well be the most dramatic current example of this syndrome. We must, of course, squarely face the problems confronting the International Atomic Energy Agency. Despite continued improvements in the past several years, the capabilities of the IAEA still fall short of what would be desirable in the "best of all possible worlds."

Greater numbers of better trained inspectors and wider use of more advanced safeguards equipment still are needed. Further improvements in the agency's internal management also will yield greater effectiveness. And the agency needs to find ways to streamline its internal lines of communication as well as to communicate better with the world at large. We are thinking about measures which may be helpful, and those of you in the nuclear industry also can and should contribute ideas. But in our efforts to improve, we must avoid exaggerating the agency's weaknesses.

There must be a much clearer understanding of what the agency's safeguards job entails. The agency's objective is to detect and thus deter diversion, not to prevent it. The agency is not a nuclear policeman. And even though there is room for improvement, the agency's overall performance in meeting that objective has been good and is getting better.

Further, as we seek to make the IAEA an ever more effective institution, we must never forget that its credibility in the eyes of the nations of the world is the essential ingredient for its success. Repeated rehashing of old or alleged failings, without fair recognition of the vigorous efforts being made to overcome them, can unfairly, yet surely, damage that credibility.

As we think of how to improve the vital safeguards role of the agency, we must never overlook its special character. Many member states have delegated considerable sovereign authority to the IAEA in a way which makes it unique amongst U.N. agencies. I suggest that alternative arrangements, if they could be forged at all, could be far less adequate.

I am happy to be able to report that the Board of Governors at its most recent meeting focused well on the business before it without excessive rhetoric addressing political issues beyond its charter. We hope that this is a harbinger of the future, reversing an unfortunate tendency toward the introduction of extraneous political issues into the deliberation of what is essentially a technical body. For our part we have made clear that we believe that such political debate has no place in the agency's deliberations. We are cautiously optimistic that consensus is building for that premise.

We believe that many other countries will work with us to insure that the IAEA remains a strong institution. And we have indicated our willingness to cooperate in insuring that the agency serves the legitimate needs of all of its member states. That position rests upon our own self-interest and common sense. Without an effective International Atomic Energy Agency, the international nonproliferation effort would be weakened and a fundamental if not irreplaceable basis for nuclear commerce would no longer exist.

The Essence of Nuclear Common Sense

Let me conclude by commenting on a strain of thinking which challenges the underlying concepts of our nonproliferation endeavor. Some outside of the government have proposed that we should begin thinking in terms of living with many nuclear powers, that extensive proliferation is "inevitable." Some even go so far as to argue that the spread of nuclear weapons would not be so bad; in the words of a recent paper from the London International Institute of Strategic Studies, "more may be better." Let me just assert that this is not my view nor is it the view of the Administration. It simply does not meet the test of common sense.

It simply is not true that widespread proliferation is inevitable. There is much that can be done to prevent it. It is vital to recall that earlier predictions of a world of 25 or 30 nuclear weapons states by the 1970s have proved fallacious. And we all need be thankful for that. Moreover, the adherence of 116 countries to the Nonproliferation Treaty, too, is a major accomplishment far beyond most predictions.

I also reject the contention that more proliferation may be better. Proliferation can only increase global instability and adversely affect the interests and well-being of many countries. It would threaten the breakdown of the nuclear peace that has characterized the last decades—a breakdown which could result from an accident, miscalculation, or intentional choice.

Next December will mark the 40th anniversary of the first nuclear chain reaction under the stands of Stagg Field at the University of Chicago. Since then, we have been confronted with both the promise and the threat of the atom. This Administration is committed to efforts to realize that promise and to control that threat. But to achieve that goal a restored spirit of cooperation within the government, between industry and government, and among the many concerned groups is needed. Not least, we need a greater measure of nuclear common sense. ■

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Nuclear Proliferation and Safeguards

UPDATE

The administration and Congress are currently reassessing U.S. strategy for preventing the spread of nuclear weapons. To help policymakers put proliferation in perspective with other national objectives, the Office of Technology Assessment is reissuing the summary of its report, **Nuclear Proliferation and Safeguards.** This OTA study was completed when the Carter administration and the 95th Congress were similarly formulating a nonproliferation program. While clearly both the domestic and international climates have changed in the intervening 4 years, most of the technological, economic, and political factors influencing the ability and desire to acquire nuclear weapons have not. The OTA assessment was a comprehensive study of those factors and their complex interactions.

Several recent events have stimulated interest in proliferation issues. First, the Israeli destruction of an Iraqi nuclear research reactor demonstrated that Israel would not rely on existing international mechanisms to prevent suspected diversion of nuclear materials from nonmilitary nuclear facilities. This incident may have created a climate more receptive to stronger, more credible control measures. Second, the new French Government is expected to tighten their nuclear export policies. This action would allow a more consolidated front in insisting on more rigorous safeguards. Finally, declining growth rates of nuclear power throughout the world have reduced the pressure to build enrichment and reprocessing plants which are particularly vulnerable to diversion.

While these events increase the likelihood that the United States will find a more receptive climate abroad for nonproliferation initiatives, other events have occurred in this country that could lead to a moderation of U.S. nonproliferation policy. They are primarily a result of conflicts with other national goals and values which have changed over time. For example, the United States' hardline policy toward Pakistan, which was based on that country's efforts to develop nuclear weapons, was moderated when the Soviet Union invaded Afghanistan. A second example of such events is the current criticism by the U.S. nuclear industry of the Nuclear Non-Proliferation Act of 1978. The industry claims that the act is unnecessarily restrictive of nuclear exports. Others have also recently reviewed the act for its general effectiveness including a recent study by the General Accounting Office ("The Nuclear Non-Proliferation Act Should Be Selectively Modified," May 21, 1981).

Reproduced from U.S. Congress. Office of Technology Assessment. Nuclear Proliferation and Safeguards; Summary. Washington, 1982. p. 6–45.

Because of these and other recent domestic and international developments, the time now appears ripe to review this Nation's nonproliferation policy. Few issues are as complex as those which involve reconciling the benefits and dangers of nuclear energy. The OTA report addressed many of them. The following 11 issues, which are of particular current interest, are described in this summary to highlight how the OTA report might be used. The executive summary of the main report follows with more detail.

ISSUES

1. The Linkage of Commercial Power Programs and Nuclear Weapons Capability.—Many nations have built commercial nuclear powerplants with the assistance of the United States and other nuclear exporting countries. The OTA report surveyed the various steps in the commercial fuel cycle, and highlighted points at which special nuclear material is exposed and vulnerable to diversion. Ordinary light water reactors by themselves are not a great threat, though some observers fear that the acquisition of nuclear materials and technologies, albeit for peaceful purposes, takes a nation too far down the path toward nuclear weapons. The most troublesome facilities are isotopic enrichment and spent fuel reprocessing plants and places where large quantities of purified plutonium and highly enriched uranium are stored. OTA noted that foreseeable safeguards measures are not adequate to detect removal from such facilities of enough material to construct several bombs. The breeder reactor requires reprocessing and recycle of plutonium. Hence, widespread use of breeders would complicate proliferation control.

2. The Linkage of Nuclear Research Reactors and Nuclear Weapons Capability.—Most of the nations (e.g., India, Iraq, and Israel) suspected of harboring nuclear weapons ambitions have research reactors that could be used to produce the necessary nuclear material. Those fueled by highly enriched uranium pose the additional risk that fresh fuel could be diverted. Thus, research reactors as well as power reactors have aroused considerable concern. The OTA study noted this potential link between the scientific and military applications. It described the various types of nuclear research reactors and enumerated the existing reactors that are capable of consuming or producing appreciable quantities of weapons-grade nuclear fuel.

3. Other Avenues To Acquire Nuclear Fuels.—Pakistan appears to be on the road to acquiring nuclear weapons material outside the context of its commercial or research programs. Efforts are underway to build an enrichment plant despite international attempts to prevent the diffusion of this technology. In this case, classified information about centrifuge enrichment was reportedly stolen, and critical equipment surreptitiously imported to build a plant based on this technology.

The OTA report described ways by which a nation might independently construct a nuclear facility dedicated to the production of nuclear weapons fuel. Specifically the report estimated the cost in time, money, and manpower for a nation to fabricate clandestinely either a plutonium production reactor, reprocessing plant, or enrichment plant. The reactor and reprocessing plant would be feasible even for a developing country but the enrichment plant requires a considerably higher level of technology.

Clandestine acquisition of centrifuge enrichment technology illustrates another route to nuclear weapons studied by OTA. That route, the purchase or theft of nuclear technology, materials or even bombs, cannot be ignored in safeguarding nuclear materials.

4. Adequacy of International Safeguards To Detect the Diversion of Nuclear Material From Nuclear Research or Power Facilities.—Experts are still debating whether the International Atomic Energy Agency's (IAEA) safeguards applied to Iraq's Tamuz research reactor would have been adequate to detect quickly either the diversion by Iraq of some of its highly enriched uranium fuel or the production of weapons-usable plutonium. The OTA study surveyed the safeguards techniques currently used and those still under development. For a reactor, where the fuel is in discrete bundles, the materials accountancy techniques are reasonably effective. OTA notes, however, that materials accounting techniques alone are neither sufficiently accurate nor timely enough to trace the flow of nuclear materials through large-scale enrichment or reprocessing plants. IAEA has not yet developed nor tested the containment and surveillance techniques to safeguard such facilities adequately. Their effectiveness is further hampered by restrictions placed on IAEA inspectors.

5. Effectiveness of Institutional Barriers to the Spread of Nuclear Weapons.—There are some serious weaknesses in the present international nonproliferation "regime." By bombing the Iraqi reactor, Israel rejected dependence on these controls. The nonproliferation treaty (NPT) does not apply to nonsignatories. Therefore, Pakistan, which has not signed the NPT, is not violating the treaty in building its enrichment plant even though it appears to be part of a weapons program. Further, although Iraq is a party to the NPT, and has done nothing in violation of the treaty, some of its actions seem more consistent with a weapons development program. These examples suggest it is time to evaluate the international nonproliferation measures in place and where they might be strengthened.

The OTA report surveyed the existing international institutions such as IAEA, the NPT, the Suppliers' Conferences, and Euratom. Beside presenting a factual background about these institutions, the report examines the delicacy and difficulty of their role: For example, imposing tight control on nuclear-weapons materials without unduly trespassing on national sovereignty, and restricting access to nuclear weapons without curtailing the availability of nuclear benefits.

6. Nuclear Supplier Role.—Since the early 1970's, the United States has provided a decreasing share of enriched uranium fuel and nuclear equipment to world markets. In recent years, new export criteria have further limited U.S. shipments abroad. The new administration has stated its intent to reverse this trend and regain U.S. leverage as a "reliable supplier."

Whether the United States can reestablish itself as a reliable supplier depends partly on the demand for nuclear fuels and services and partly on the competition from other exporting nations. In its review of the worldwide nuclear industry, OTA described both the decreasing growth in nuclear power and the increasing capacities (especially in enrichment facilities) of other supplier nations.

The OTA report also addressed the complex relationships among nuclear exporting and importing nations. The United States cannot apply very stringent export controls unilaterally without incurring the resentment of importing nations and driving them to other suppliers. In its relations with other suppliers the United States is simultaneously a competitor in the nuclear market and an ally in international security agreements. It has so far been alone in the intensity of its concern about proliferation and faces a challenge to gain the cooperation of other suppliers in more stringent multilaterial controls. The United States must also consider the needs and desires of importing nations in evaluating the consequences of its nonproliferation policies.

7. Interaction Between the U.S. Domestic Nuclear Program and the International Nonproliferation Climate.—The United States is by far the largest user of nuclear power even though it only accounts for about 11 percent of our electricity production. Decisions made here will inevitably influence other nations by setting an example or by affecting the supply of fuel. Domestic decisions can unwittingly affect proliferation risks abroad. For instance, the Carter policy to forego reprocessing strengthened our bargaining position in trying to deny these vulnerable facilities to potential proliferators, but it could also eliminate a source of nuclear fuel. Fuel is plentiful now, but future scarcity could increase the incentives for other nations to build reprocessing plants and other hard-to-safeguard fuel cycle facilities. Worldwide development of breeder reactors would also raise significant proliferation concerns although they could also eliminate uranium resource concerns. The OTA report investigated the need for such facilities in the United States and their impact abroad.

Foreign sales have become increasingly important to U.S. nuclear corporations as domestic business has dropped. U.S. nonproliferation policy has hampered exports—one of the factors stimulating the current reappraisal. Though the OTA report was prepared before the Nuclear Non-Proliferation Act of 1978 was passed, it examined the nuclear industry and its products both in the United States and abroad.

8. Other U.S. Initiatives To Limit Nuclear Proliferation.—The OTA report outlined various policy options—unilateral, bilateral, and multilateral. It assesses both their cost and potential impact. The report suggests the need for bilateral approaches to be tailored to each particular nation. These options are assessed in light of the need to balance nonproliferation with other foreign policy goals.

9. Feasibility of Weapons Production.—Some observers have contended that building a bomb is a relatively simple matter for a nation or even a terrorist group. The OTA study contains an unclassified assessment prepared by experts in the design and construction of nuclear weapons. The study estimates the amount of material and level of effort that might go into a weapons program, and describes the yield and predictability of the device that would result. The task is well within the capability of any nation with a significant scientific infrastructure, but the quality of the weapons would depend strongly on the capability of the people involved.

10. Protection of U.S. and Worldwide Nuclear Facilities Against Theft of Materials by Nonstate Groups.—This question fortunately has not been tested by any real terrorist attempt, but the possibility cannot be ignored. The OTA study describes the current state-of-the-art for domestic physical security, and assesses future research needs.

11. Incentives and Disincentives for a Nation To Acquire a Nuclear Weapon.—Many nations have the technological capability to construct nuclear weapons, but their incentives have so far been outweighed by the disincentives. The nations most strongly suspected of having clandestinely produced weapons or begun the effort are those who are most isolated, diplomatically or militarily, or who feel threatened by a powerful neighbor. The OTA study concentrated on case studies to illustrate how the varied set of incentives and disincentives interact within any particular nation. Understanding these complex motivational factors is critical for an effective nonproliferation policy.

EXECUTIVE SUMMARY

Incentives and Disincentives

As the technological and economic barriers to proliferation have diminished, the decision whether or not to acquire nuclear weapons has become principally political. It will hinge on a complex balance of incentives and disincentives which, though unique for each country, exhibit sufficient similarities to permit generalization.

General **incentives** that might lead a government to select the nuclear weapons option include the following:

1. **Deterrence.**—Several states on every list of potential new nuclear weapons states (Nth countries) have reason to fear direct attack or

long-term deterioration of their security vis-a-vis neighbors or regional adversaries.

2. **Increased International Status.**—As a symbol of modernity and technological competence, nuclear weapons are often viewed as a source of status, prestige, and respect. Aside from its symbolic significance, a nuclear weapon capability will augment national military and political power in real terms.
3. **Domestic Political Requirements.**—Nuclear weapons may bolster a government's domestic political support for many of the same reasons they can enhance a nation's international reputation. The Indian detonation may have been motivated in large part by such considerations.
4. **Increased Strategic Autonomy.**—Even if it is already protected by an alliance, a nation may feel it has more options to pursue national objectives as a nuclear state than as a nonnuclear state. France is an example of this reasoning.
5. **Strategic Hedge Against Military and Political Uncertainty.**—Uncertainty about the reliability of allies and the intentions and capabilities of adversaries may make nuclear weapons attractive.
6. **Possession of "A Weapon of Last Resort."**—Nuclear weapons may be perceived by a state such as Israel as offering an ultimate guarantee against extinction.
7. **Leverage Over the Industrialized Countries.**—Certain developing countries may conclude that acquiring nuclear weapons is a means of compelling the advanced nations to take more serious account of the interests of the less developed.

General **disincentives** that might discourage a state from acquiring nuclear weapons include the following:

1. **Resource Diversion.**—It is argued that a nuclear weapons program is not an optimal use of limited national resources, and that the loss of the opportunity to pursue economic or social programs outweighs the benefits of a nuclear weapons program.
2. **Adverse Public Opinion.**—In a number of countries (e.g., Japan) prevailing public opinion appears to oppose development of nuclear weapons.
3. **Disruption of Established Security Guarantees.**—Reliance on security guarantees constitutes one of the most important elements in many countries' strategy for coping with adversaries. If the acquisition of nuclear weapons jeopardizes that guarantee, the effect may be counterproductive in terms of national security.
4. **Infeasibility of a Desired Nuclear Strategy.**—The nation may be unable to attain the desired nuclear capability in an appropriate time frame, or because of a lack of resource.
5. **Adverse International Reactions.**—Anticipation of censure from the international community (including the superpowers) would constitute a significant disincentive.

6. **Adverse Reactions by Adversaries.**—Proliferation may stimulate an adversary to take a variety of measures, including the acquisition of a countervailing nuclear force.
7. **Advocacy of Neutralist Aims.**—Countries like Sweden and Switzerland eschew a nuclear weapons capability, in part because it would be perceived as degrading their arms control and neutralist positions.

A review of the existing nuclear-weapons states suggests that the desire to maintain or enhance the nation's security and international influence were the primary incentives behind their original weapons programs. Economic disincentives, even for less developed nations such as China and India, were not compelling. Similarly, for Nth countries, security and political influence are the dominant incentives. Thus far, however, these have been offset by disincentives, notably concern about adversary responses, the economic costs of diverting resources to weapons development, and possible alienation of the superpowers with a resulting loss of nuclear and economic development assistance.

Nonstate Adversary

Subnational groups might be as interested as nations in obtaining nuclear weapons. Potential nuclear nonstate adversaries span a wide spectrum, from the isolated lunatic, to the criminal, to the organized revolutionary group. The actions they might conceivably undertake range from hoaxes to the construction and detonation of a crude nuclear explosive device.

Concern about the potential nuclear nonstate adversary has continued to grow since the late 1960's, although incidents involving nuclear material or facilities that have occurred so far have been mostly low-level acts of vandalism or sabotage. There is no evidence that any nonstate group has attempted to acquire weapons material for use in a nuclear explosive.

However, the lack of serious malevolent nuclear actions is not a cause for complacency about the future. The expansion of nuclear power, the advent of plutonium recycle, and trends toward increased violence could lead nonstate adversaries to attempt large-scale nuclear threats or violence.

Terrorist groups might decide to use nuclear means to cause widespread damage or kill large numbers of people, but so far terrorists have not even gone to the limit of their nonnuclear capability to destroy and kill. On the basis of the historical record and the theory of terrorism, it is not clear that causing massive casualties is attractive to terrorists; indeed it could even be regarded as counterproductive. Therefore, some experts have argued that mass murder will probably not be contemplated by terrorist groups capable of making elementary political judgments.

Several factors could cause terrorists to break the previous patterns. A desperate insurgent group might decide to strike one catastrophic blow.

Nihilist groups may emerge, whose goals would be well served by pure massive destruction. On the other hand, the primary attraction for terrorists to go nuclear may not be to cause mass casualties. Almost any nuclear action by terrorists would cause great alarm, attract widespread attention, and possibly win concessions.

Whether organized crime should be counted among likely nuclear nonstate adversaries remains a matter of debate, centering around its interest in doing so rather than its capability to undertake nuclear actions. The acquisition of a nuclear capability of its own, however, would mean that organized crime had decided to defy the nation in which its normal and highly profitable activities take place. It is easier to imagine organized crime playing a middleman role in a nuclear materials black market. Some observers have argued that organized crime would steer clear even of supplying nuclear material for nuclear weapons, because this activity might evoke a level of response that would jeopardize all their activities.

Some perpetrators of nuclear hoaxes have manifested desires of becoming nuclear nonstate adversaries, but none have demonstrated the required capabilities. If hoaxers did have access to nuclear material, it is not clear that they would escalate from hoax to action.

Psychotics have probably been responsible for many of the low-level nuclear incidents and hoaxes that have occurred so far. Psychotics have also been the perpetrators of many known schemes of mass murder. Thus, in terms of intention alone, some psychotics are potential nuclear nonstate adversaries. In terms of capability they probably rank lowest of all the categories of potential nonstate adversaries. However, there are some brilliant psychotics who have technical knowledge and skill. If such an individual had the will to cause mass destruction and had access to nuclear material, he would constitute a formidable adversary.

Whether any of the current potential nonstate adversaries will decide to go nuclear cannot be answered at this time. There is a vast area of uncertainty between what can be done and what will be done. This area could be reduced if analysts had a better understanding of how potential adversaries themselves perceive the usefulness of nuclear actions. Moreover, in the case of terrorists, there is at present no clear understanding of how they could exploit a nuclear action or threat to effect an irreversible political gain of magnitude comparable to the action or threat.

The nuclear nonstate adversary might not arise from those groups currently identified as potential nuclear adversaries. International terrorists are a new entity that emerged in the past decade. It is difficult to say what new entities may emerge in the coming decade. It is disquieting to realize that most new terrorist groups have not been detected prior to their first terrorist act.

Among current adversaries, new tactics may be invented to effectively exploit the leverage that a nuclear capability would give. If an individual or a group did successfully carry out a scheme of nuclear extortion or violence, other individuals or groups would probably try to imitate their act.

Moreover, the growth of a transnational terrorist network over the past several years means that no nation, however invulnerable its own nuclear facilities, can regard itself as invulnerable to nuclear nonstate adversary action.

Civil Liberties Implication of Safeguards

Whether a safeguards program to protect special nuclear material in a plutonium industry would jeopardize civil liberties has been a growing topic in the plutonium recycle debate. The concern is not only to protect rights of privacy, free expression, and fair procedure for employees of a plutonium recycle industry, but also to ensure that residents of nearby communities, political critics, and society at large are not subjected to unacceptable levels of surveillance in order to prevent diversion attempts, or to even more harsh and intrusive techniques if recovery of diverted material had to be undertaken. Judgments on what safeguards measures would be reasonably required and what their civil liberties implications would be is, in the first instance, a matter of public policy for elected officials and the public, and only later an issue that might produce judgments of constitutionality or interpretive modifications from the courts.

Concern over the civil liberties implications of plutonium recycle first arose when projections of the size of the industry were much higher than they are now. It now appears that only about 20,000 employees will be required to have clearances for work in the fuel cycle. Transportation of pure plutonium could possibly be eliminated by arrangements such as colocation or coprocessing. Both lowered growth and potential technological innovations affect perceptions of civil liberties problems.

It is generally accepted that protecting plutonium facilities from diversion efforts would represent a genuine security need, that there is no way to structure an adequate safeguards program that would not actually or potentially have some civil liberties impact, and that there is no way for society to eliminate all the motivations under which terrorists or deranged persons might try to divert plutonium for their purposes. As a result, safeguards measures of the kind used in other high-security contexts would have to be applied here.

Such safeguards fall into four categories: 1) employee screening, 2) material protection, 3) threat analysis, and 4) recovery measures. In each, there are possible techniques ranging from those raising minimal threats to civil liberties to those that, if used, would raise far more serious questions.

The debates over what safeguards would be needed and how these would affect civil liberties has produced three main positions:

Position 1 maintains that a plutonium economy would require such extensive security safeguards and have such high impact on civil liberties that basic freedoms would be jeopardized. It assumes that Congress and the public would insist on a rigorous, virtually zero-risk program, especially if actual incidents heightened concern. Furthermore, preventive intelligence programs would inevitably be expanded to cover antinuclear groups and protest movements and lead to a rise in surveillance, databanks, and infiltration of dissenters, not just terrorists. Finally, should there be a successful diversion and blackmail threat, sweeping incursions of personal and press freedoms would take place. To avoid creating risks of such dangers, and because it is believed there are alternative ways of conserving and securing energy that do not raise comparable threats to civil liberties, advocates of this position call for a rejection of plutonium recycle in the United States on civil liberties grounds.

Position 2 maintains that safeguards can be adopted that would be both effective for security purposes and acceptable in terms of civil liberties, just as other high-security activities are now safeguarded. Believing that plutonium is a necessary and safe energy source, the notion is rejected that threats from a handful of terrorists or deranged persons should force this Nation to forego plutonium recycle. Because persons working in this industry would do so voluntarily, there would be nothing improper in using techniques such as personnel clearances or on-the-job surveillance. Diversion and bomb threats should be treated with the same professional skills that would be used for other terrorists threats, whether with chemical, biological, or nuclear material or in hostage situations. Preventive intelligence activities would be put under clear legislative guidelines and supervisory checks. Position 2 concludes that plutonium recycle should be allowed to proceed and that continually improved safeguards systems should be developed as the industry grows.

Position 3 would also go ahead with plutonium recycle but only if the philosophy of a safeguards program were that some small risks of diversion would be accepted in order to avoid major risks to civil liberties. They would limit safeguards measures to those meeting specific criteria of effectiveness, limitation, and capacity for control against abuse. A least intrusive measure standard would be followed. This position would require such standards to be developed in public proceedings, written into legislation, monitored by independent review, and regularly audited.

These sets of assumptions and judgments could be significantly affected by alterations in a plutonium system or in safeguards options. Transportation risks might be reduced if the policy of colocating reprocessing and fuel fabrication plants were adopted. Coprecipitation of plutonium and uranium at the reprocessing plant would also eliminate the transport of pure plutonium. Such measures, coupled with the use of hardened facilities, could reduce the pressures to use intrusive preventive intelligence measures.

However, some observers believe that the fundamental civil liberties problems would still remain, especially in a recovery operation.

These three approaches on civil liberties not only rest on sociopolitical judgments about liberty and security but also mirror the main positions on plutonium recycle in terms of safety and economy. Thus, the civil liberties aspect is one portion—though a very important part—of the total judgment about plutonium recycle. If plutonium recycle does go forward, a most important task will be the close and steady monitoring of the safeguards program to keep it consistent with U.S. civil liberties.

Nuclear Weapons

Assuming that a nation or a nonnational group had the will to design and construct a nuclear weapon, would it also have the ability? This chapter examines the manpower, time, money, and equipment necessary to design and construct the explosive, assuming that enough fissile material had been obtained by one of the routes discussed in chapter VII of the full report.

These requirements depend on the complexity of the nuclear weapon. An assessment of the minimal program necessary to produce a nuclear weapon is of special relevance to nuclear proliferation. Chapter VI examines only relatively small weapons development programs and thus considered only low-technology designs, i.e., equivalent to 1945 U.S. technology.

A minimal **national** program is an effort to produce, **without nuclear testing,** a first weapon which is **very confidently** expected to have a **substantial nuclear yield.** This program will call for a group of more than a dozen well-trained and competent persons with experience in several fields of science and engineering. They would need a high explosive field test facility and the support of a modest, already established, scientific, technical, and organizational infrastructure.

If these requirements are met and the program is properly executed the objective might be attained approximately 2 years after the start of the program, at a cost of a few tens of millions of dollars. This estimate does not include the time and money to obtain the fissile material or to establish the infrastructure assumed above.

Some details of the effort would depend on which of the two general types of weapons—gun or implosion—were built. Contrary to common belief, the construction of a gun-assembly weapon presents difficulties roughly equivalent to those of an implosion weapon.

The success or failure of producing a militarily effective nuclear explosive, via the effort described above, is far more dependent on the competence of the people involved than on the technological problems themselves. In trying to evaluate the potential of a specific nuclear weapons development program a detailed knowledge of the strengths and weaknesses of the personnel is more valuable than details of the technological base of the country. However, some general statements can be made about what it is possible to achieve with the national effort described above.

The material for a nuclear weapon might be plutonium, or uranium with a high concentration of either one of two uranium isotopes—U^{233} or U^{235}. Using either form of uranium or weapons-grade plutonium it is possible to design low-technology devices that would reliably produce explosive yields up to the equivalent of 10 or 20 kilotons of TNT. With reactor grade plutonium it is possible to design low-technology devices with probable yields 3 to 10 times lower than those mentioned above (depending on the design), but yields in the kiloton range could be accomplished.

Militarily useful weapons with reliable nuclear yields in the kiloton range can therefore be constructed using low-technology and reactor-grade plutonium.

The national program just described is at the upper end of a range of minimal efforts to construct a nuclear fission explosive. At the low end, a small group of people (possibly terrorists or criminals), none of whom have ever had access to classified literature, could possibly design and build a crude nuclear explosive device. They would not necessarily require a great deal of technological equipment or have to undertake any experiments. The group would have to include, at a minimum, a person capable of searching and understanding the technical literature in several fields, and a jack-of-all-trades technician. Again, it is assumed that sufficient quantities of fissile material have been provided.

The actual construction of even a crude nuclear explosive would be at least as difficult as the design itself. In contrast to the national effort, the small group of people described above would probably not be able to develop an accurate prediction of the yield of their device. It could be a total failure, because of either faulty design or faulty construction. A great deal depends on the capability of the group; if it is deficient, not only might the device itself be a total failure, but a member of the group might suffer serious or fatal injury.

However, there is a clear possibility that a clever and competent group could design and construct a device which would give a significant nuclear yield.

Sources of Nuclear Material

A nation that wants nuclear weapons must develop an appropriate source of fissile material. The amount of material needed for an explosive is about 5 to 10 kg of plutonium or U^{233} or 15 to 30 kg of highly enriched uranium, that is, uranium that contains about 90 percent or more of the isotope U^{235}. Uranium enriched to as low as 20 percent could be used in nuclear weapons, but much more material would be required. The exact quantity of uranium depends on its form and on the type of weapon—implosion or gun assembly.

Fissile material might be obtained by one of three general routes. Most attention has recently been focused on diversion of material from a civilian nuclear power program. A nation might evade safeguards on a nuclear facility or use an unsafeguarded facility, possibly after the abrogation of safeguards agreements.

The second route is the construction of facilities specifically designed to produce nuclear weapons material. Examples of such dedicated facilities are a small reactor to produce plutonium or an enrichment plant to yield highly enriched uranium. A third route is the purchase or theft of fissile material or even a complete weapon. Each of these routes is subject to constraints, and will be evaluated differently by different nations or groups depending on their resources, capabilities, political situations, and intentions.

Diversion From Commercial Nuclear Power Systems

Although a nation could remove the fissile material needed for nuclear weapons from its commercial power systems, no present nuclear weapons state has followed this path. The difficulty of such diversion depends on the type of reactor system and the safeguards applied to the system. The reactor type determines the necessity for and nature of various fuel-cycle facilities. These facilities might include enrichment, fuel fabrication, and reprocessing plants to separate plutonium and uranium from spent fuel. The opportunities for diversion from all such facilities will be assessed here as a function of the reactor system.

The two classes of nuclear power reactors available on the world market today are light water reactors (LWRs) developed by the United States and Canadian heavy water reactors (CANDUs). Others which could be deployed in the near future are the high-temperature gas-cooled reactor (HTGR) and the advanced gas-cooled reactor (AGR). Most development effort is being focused on the liquid metal fast breeder reactor (LMFBR), but commercialization is not expected for at least 10 years.

LIGHT WATER REACTORS

Nuclear fuel convertible to weapons-grade material could be diverted from any point in the LWR fuel cycle, but the difficulty of conversion (chemical or isotopic separation), and hence the usefulness of the material to the diverter varies markedly from point to point. The most attractive points are those where plutonium appears in separated form: in the reprocessing plant; in transport to a mixed-oxide fuel fabrication plant; and at the input area of the fuel fabrication plant. These steps are necessary to the LWR fuel cycle only if plutonium in the spent fuel is to be recycled back into the reactor. Plutonium recycle is not essential to the operation of LWRs, but may be undertaken to reduce the demand for uranium and the need for enrichment.

If spent fuel is not reprocessed, the LWR fuel cycle includes only the steps through spent fuel storage. This is known as a once-through or throwaway cycle. Theft of spent fuel, followed by subsequent extraction of the plutonium, is only barely credible for a highly organized, well-financed, and technically competent nonstate adversary group with a secure base of operations. This action would expose the group to radiation hazards, and to a significant possibility of discovery because of the time required for chemical processing. Isotopic enrichment of fresh fuel to weapons material is not credible for a nonstate adversary.

In the LWR cycle without commercial reprocessing, the national diverter would have to divert spent fuel for reprocessing or fresh fuel for enrichment. A small reprocessing plant capable of separating enough plutonium for several explosives per year is within the capability of many countries even if an economical commercial plant is not (see section on "Dedicated Facilities"). Removal of the spent fuel could probably not be done covertly, however, since effective safeguarding of LWRs and their spent fuel pools appears feasible with relatively straightforward improvements in IAEA techniques and procedures. If a nation did decide to divert spent fuel openly, it would have to choose between maintaining normal power output from the reactor and producing so-called weapons-grade plutonium. When operated normally, a 1,000 MW(e) LWR discharges about 240 kg of plutonium in 31,000 kg of spent fuel annually. Because this plutonium contains about 25 percent of the isotope Pu^{240} it is not ideal for weapons, although reliable weapons can be made using such material. The nation that wanted weapons-grade plutonium (with 7 percent or less Pu^{240}) would have to operate the reactor differently, sacrificing around one-half the power and producing about one-quarter as much plutonium per kilogram of fuel. This mode of operation approximately triples fueling requirements.

The front end of the once-through cycle contains only natural- and low-enriched uranium. Enrichment to a considerably higher fraction of U^{235} would be necessary for weapons. This would be expensive and difficult for most nations, which lack commercial enrichment facilities. Nations possessing a commercial facility (especially a centrifuge plant) could covertly dedicate a portion of it to weapons grade enrichment, use the same technology to construct another facility for weapons grade production, or abrogate safeguards and overtly convert some or all of the plant to the production of highly enriched uranium. Covert diversion from a centrifuge enrichment plant would be difficult to detect with safeguards alone, judging by present constraints on safeguards procedures. Overt conversion of a commercial centrifuge plant could quickly yield large amounts of highly enriched uranium.

In an LWR fuel cycle that includes plutonium recycling, the material at the output of the reprocessing plant, the first stages of the mixed-oxide fuel fabrication plant, and the transportation link between the two plants, is vulnerable to both the national and nonstate diverter. As presently envisaged, this material is pure plutonium oxide which can be used directly in a nuclear explosive. Once plutonium oxide is mixed with uranium oxide at the fuel fabrication plant, the material becomes significantly less attractive to the nonstate diverter, because of both the time-consuming chemistry required to separate the plutonium and the logistics of diverting a large mass of material.

For the national diverter, a reprocessing plant provides immediate access to weapons material. A large reprocessing plant will be extremely difficult to safeguard effectively against covert diversion by the national diverter. Enough plutonium for several explosives per year could be extracted from the process stream within the error limits of material accountancy. Furthermore, however effective international safeguards may become in their job of detecting covert diversion, they cannot prevent a nation from seizing its own reprocessing plant. Once the political decision is made to seize the plant or its plutonium stockpile the nation can have reliable explosives in a matter of days to weeks, even using reactor-grade plutonium.

THE CANDU

Separated fissile material is not exposed anywhere in the CANDU fuel cycle because no reprocessing occurs. The diversion points in the CANDU cycle are the reactor itself and the spent fuel storage pool. As in the case of the LWR, nonstate theft of spent fuel followed by reprocessing is only barely credible. National diversion and subsequent reprocessing of CANDU spent fuel, however, is technically possible for many nations.

Whether a nation wishes to remove material openly or secretly, it will find the CANDU more vulnerable to diversion than the LWR without plutonium recycle. The CANDU is refueled continuously without having to be shut down, and the fuel bundles are small. Thus, fuel bundles need only be pushed through the reactor faster than normal to obtain weapons-grade plutonium.

IAEA safeguards systems for CANDU reactors and storage pools (possibly involving resident inspectors) can probably be designed and implemented so that significant diversion of spent fuel bundles will be extremely unlikely to remain undetected. Thus, diversion from the CANDU is also likely to be overt.

A nation that decides to divert openly from a CANDU reactor may be less vulnerable than the operator of a LWR to such sanctions as withholding of fuel services. The CANDU uses natural uranium and does not need enrichment. However, it does rely upon a supply of heavy water, which might be subject to an embargo.

THE LMFBR

The diversion-prone points in the LMFBR cycle are qualitatively the same as those in the LWR cycle with plutonium recycle, but its plutonium is more abundant and concentrated. Moreover, weapons-grade plutonium is produced in one portion of the LMFBR. An additional advantage to the national proliferator is that the breeder gives it an independent supply of fuel, making it less vulnerable to sanctions. Another breeder reactor concept—the gas-cooled fast reactor (GCFR)—may be even more attractive to the nation that wants nuclear weapons because it breeds slightly more plutonium than the LMFBR.

THORIUM FUEL CYCLE

Power reactor fuel cycles starting with thorium as the natural resource have received much less attention than the uranium/plutonium fuel cycles discussed above. In this fuel cycle the thorium produces a fissile isotope, U^{233}. Except for the HTGR, light water breeder reactor (LWBR), and the molten salt breeder reactor (MSBR), thorium/uranium fuel cycles have involved only paper studies. Yet thorium cycles offer a number of potential advantages, such as the possibility of more efficient use of resources through thermal breeders or near breeders. Thorium fuel cycles also present barriers to diversion. The fresh fuel can be rendered unusable for weapons by denaturing, that is, by mixing U^{233} with the nonfissile isotope U^{238}. In addition, separated U^{233} is dangerous to handle because of the penetrating gamma radiation emitted by one of the decay products of U^{232}, an unavoidable impurity in U^{233}.

COMPARISON OF REACTOR SYSTEMS

The relative value of these opportunities for diversions depend on the intention and capability of the diverter. Four general categories of proliferators can be envisioned:

1. nations desiring a major weapons force;
2. nations satisfied with a small and not necessarily sophisticated nuclear capability;
3. nations wishing the option of rapid development of nuclear weapons in the future; and
4. nonstate adversaries limited to a few crude devices.

The factors that these diverters would consider include:

1. the production rate and quality of fissile material;
2. ability to withstand international embargoes and sanctions;
3. impact of diversion on the fuel cycle;
4. cost of the facilities;
5. ease of conversion of diverted material to weapons material; and
6. opportunities for covert diversion.

Table 1 ranks the various systems in terms of their resistance to each of these proliferators.

RESEARCH REACTORS AND CRITICAL ASSEMBLIES

A substantial diversion or theft potential exists outside the commercial power industry, because of: 1) the large number of research reactors throughout the world that are either fueled with highly enriched uranium or produce significant amounts of plutonium, and 2) the critical assemblies in several countries that use plutonium. (Critical assemblies are experimental facilities that run at zero power.) Critical assembly plutonium is essentially uncontaminated by fission products and is of high quality for use in weapons.

Table 1.—Reactor Systems Resistance to Proliferation (Note that a high rank means the system is least susceptible to diversion.)

Reactor system	Availability	1. Major force	2a. Small force (unsafeguarded facilities)	2b. Small force (safeguarded facilities)	3. Option	4. Non-State adversaries
Light water reactor (enrichment)	Present	5	6	7	1	1
Light water reactor (spent fuel)	Present	4	3	1	4	4
Light water reactor (reprocessing)	Present	6	5	8	5	6
CANDU	Present	8	7	2	2	2
High-temperature gas reactor	Near term	7	4	6	6	7
Advanced gas reactor	Near term	3	2	3	3	3
Liquid metal fast breeder reactor	R&D (advanced)	9	9*	9	9	9
Gas-cooled fast reactor	R&D	10	10*	10	10	10
Light water breeder reactor	R&D	1	1	4	7	8
Molten salt breeder reactor	R&D (present inactive)	2	8*	5	8	5

*May not be an option for cost or technological reasons.

SOURCE: Office of Technology Assessment.

ALTERNATE FUEL CYCLES

Present commercial and near-commercial fuel cycles have been conceived and developed with essentially no thought given to their implications for proliferation or to the difficulties of safeguarding them. However, the Energy Research and Development Administration (ERDA) has recently set up a study in the Office of Nuclear Energy Assessments, Division of Nuclear Research and Applications, to investigate and evaluate alternate fuel cycles. The criteria for evaluation of alternate cycles are: 1) potential for preventing proliferation; 2) safeguard potential; 3) technical feasibility; 4) economics and resource utilization; 5) commercial feasibility; and 6) introduction date. In evaluating the potential for preventing proliferation, the study will emphasize deterrence to diversion or theft of nuclear material for the purpose of making an explosive weapon. Both domestic and foreign applications will be considered.

The schedule called for a final report in October 1978, with a developed set of proliferation criteria and an assessment of selected alternate fuel cycles. Supplemental funds of $4 million for fiscal year 1977 had been requested from Congress by ERDA, and the program was budgeted at $7 million for fiscal year 1978.

In order for the results of this program to be most useful, the alternates that are selected for study should be balanced between relatively short-term payoff technical modifications of existing cycles and radically new approaches, specifically including continuation of study on the nonproliferating-reactor concept discussed below.

NONPROLIFERATING REACTORS

One of the most intriguing concepts studied by ERDA was funded at $250,000 for fiscal year 1977 by the Division of International Security Affairs (ISA). This is the concept of nonproliferating reactors. Through strict design requirements, this approach seeks to eliminate the diversion paths available in current and projected reactor systems and their associated fuel cycles. Several key design criteria are: 1) the system shall contain only a small amount of fissile material at any given time after startup; 2) there shall be no access to the fuel during the lifetime of the reactor; 3) any diversion of fuel will cause the reactor to shut down; 4) the reactor shall be refueled by the addition of fertile (i.e., nonfissile) material only; and 5) the reactor shall not operate as a breeder, but as a sustainer producing only enough fissile material to keep itself running. Conceptual studies of three reactor systems have been funded by this program. This program is the first attempt to design reactors with nonproliferation as a specific design criterion. As such, it deserves continued funding at an expanded scale, a wide hearing, a thorough assessment, and an open-minded comparison with other alternatives. There are apparently no plans by ISA to continue funding this program in fiscal year 1978. If this promising new approach is to receive further attention it apparantly must do so under aegis of the Alternate Fuel Cycle Program, described above.

Dedicated Facilities

All nations which now possess nuclear weapons have obtained the fissile material from facilities specifically dedicated to the production or separation of this material. Thus, a commercial nuclear power program is not a prerequisite for a nuclear weapons program. The main advantage of a dedicated facility is that it provides a reliable, possibly secret and/or legal source of weapons material. As safeguards are improved and extended over all imported nuclear facilities, and as greater restraints are placed on the sale of enrichment and reprocessing plants, nations embarking on a nuclear weapons program may be constrained to follow this route.

Construction of a dedicated facility (which is not safeguarded) constitutes a violation of the NPT by parties to that treaty. Nations that are not party, however, can quite legally build and operate weapons facilities, even while importing safeguarded nuclear material or technology from NPT nations.

A nation which decides to build a dedicated facility has two basic options:

1. Construct a plutonium production reactor plus a reprocessing plant to separate the plutonium from the spent fuel.

   A variant on this option is to feed a dedicated reprocessing plant with spent fuel from an already existing research or power reactor. (This is the route India took with the unsafeguarded Cirrus research reactor.)
2. Construct an enrichment plant to produce weapons-grade uranium from natural or low-enriched uranium.

The choice between these options depends on a number of factors peculiar to each country, including its technological base, production schedule, the existence of any civilian nuclear facilities, and the number of weapons wanted. These factors, especially the technological base, will also affect the time, personnel, and cost required for construction of dedicated facilities.

Dedicated facilities are smaller and can be simpler in design than corresponding commercial facilities. The technology for reactors and reprocessing plants is not classified, with several detailed plans of such plants available to the public. These facts make construction of certain dedicated facilities within reach of many nations. In particular:

1. The construction of a reactor producing about 10 kg of plutonium per year and a small reprocessing plant is within the capabilities of many developing nations. The total capital cost would be several tens of millions of dollars, and about 5 years would be required to construct the facilities and produce and separate the first 10 kg of plutonium. The reactor would be fueled by natural uranium, moderated by graphite, and cooled by air. Very pure Pu^{239} would be produced.

2. Crude, imperfectly shielded, but technically feasible reprocessing plants based on the techniques of solvent extraction or ion exchange can be built for a quick emergency response program at a cost of one to several million dollars. The nation would have to have access to spent fuel from a reactor to feed into such a plant. Such a facility would not be suitable for a sustained weapons program.
3. A low-cost, low-detection risk option for a nation already possessing a commercial centrifuge facility may be to build a small "add-on" centrifuge facility, either on or off the site, for the production of highly enriched uranium.
4. A reactor producing about 100 kg of plutonium per year and fueled by natural uranium would be a suitable dedicated facility for an open weapons program in an at least moderately advanced nation.
5. There are no enrichment techniques presently suitable for dedicated facilities in any but technically advanced nations. (An exception might be an "add-on" to a purchased commercial centrifuge facility, as discussed in #3, above.) Laser isotope separation is unlikely to be feasible for use as a dedicated facility (barring an unforeseen breakthrough) before the late 1980's or early 1990's and then probably only for technically advanced nations.

In brief, many nations might be able to build a dedicated facility to produce fissile material for a weapons program. For example, about 40 nations already possess one or more research or power reactors and thus have experience with nuclear programs.

It is unlikely that a dedicated facility to support a large weapons program (about 10 explosives per year) could remain undetected. However, a dedicated facility to support a small weapons program (one or two explosives per year) could present a detection problem for intelligence agencies, especially if the nation were not among the five or six Nth countries most likely to be under intensive surveillance.

Purchase and Theft

A third potential route to proliferation is by the direct acquisition of weapons or fissile material from another country. A nation or group could purchase these items from an illegal black market, covertly buy or trade them from a friendly nation in what is termed a gray market, or steal another nation's weapons. Any of these methods bypasses the need for the expensive and demanding technologies entailed by the commercial power and dedicated facilities routes. If this type of transaction emerges, the scope of proliferation could be extended to technologically limited nations and nonstate adversaries who would otherwise have found the task difficult and risky. The pace of proliferation could be further accelerated by the relative ease of obtaining weapons, a general sense that the nonproliferation regime was crumbling, and a specific concern that one's enemies might be covertly arming.

Nuclear black market commodities might be fissile material, weapons designs, or weapons. Of these, the most likely to drive a black market is the fissile fuel plutonium: If plutonium is extensively recycled numerous opportunities would exist to divert this substance. Only a very small fraction of the plutonium need be taken from a full plutonium fuel cycle to produce material for many bombs per year. An alternative source might be material intended for research purposes and military weapons.

The most probable customers for material used directly in a nuclear weapon are less developed nations or countries faced with an emergency that foreclosed other routes to nuclear weapons. This material might also interest terrorists or criminals bent on extortion. The suppliers might be employees of a reprocessing plant who gradually withdraw amounts below safeguards detection limits, or criminals or nonstate adversaries who stage armed attacks on plutonium shipments or stockpiles. The size of a nuclear black market would be small compared to that of the illegal drug market, but profits could still be large enough to make emergence of such a market credible. Establishment of contact between diverse suppliers and buyers for isolated transactions would be difficult. Once initiated, however, this contact would be the nucleus for a sustained market, especially if supply and demand are high.

In a gray market, transactions are technically legal but are kept secret because of anticipated negative responses, including sanctions and preemptive attacks. In order for the transaction to be legal, the buyer will always be a government. The nation might be interested in such commodities as weapons, fissile material, or technical assistance, although weapons would probably be supplied only under extreme national emergencies. The country might more commonly receive nuclear technical assistance.

One potential supplier would be another nation motivated by the need to obtain a vital resource such as oil or by the desire to curry favor with a key nation. Another supplier conceivably could be a corporation that is subjected to pressure to assist a nation in which it has considerable investments or sales expectations. Most corporations, however, will have high resistance to such pressure in matters as serious as nuclear weapons proliferation. A third supplier could be an appropriately trained individual, peddling himself as a scientific mercenary.

The gray market involves more natural partners (national allies) than the black market, and it may be more easily established although less widely spread. Participants in both markets must take high risks and thus must have strong motivations. Both markets may be detected by enhanced intelligence activities, and once located, could be halted only by the cooperative efforts of many nations. The black market in plutonium might be largely eliminated by a ban on reprocessing. An adverse feature of this ban, or any other measure that decreases employment in the nuclear industry, is its tendency to create a potential supply of scientific mercenaries.

Theft is the most direct route to nuclear weapons. A detailed assessment of military security was not made for this report, but some observations can be made. Weapons are protected internally against unauthorized use in the United States, but might be rebuilt to bypass these mechanisms. The psychological value of a successful theft would be considerable even if the weapons were actually unusable. Security for weapons is considerably more stringent than for commercial facilities, but even so, the need for upgrading is recognized by the Department of Defense. A well-trained commando raid of about 8 to 20 attackers using an imaginative plan and assisted by insiders could be difficult to resist without rapid reinforcement. Intelligence activities could make an important contribution by providing warning of such an attack. Massive attacks that are essentially acts of war would be even more likely to succeed, but would be easy to track. Strong political or military responses would be required to assure return or destruction of the weapons. Physical security used by other weapons states seem to present about the same obstacles to theft as those of the United States, but new nuclear states may be more vulnerable.

Control of Proliferation

Attempts to acquire nuclear weapons by any of the three routes just discussed are subject to four general levels of control effort. The first is detection of the attempt, either by safeguards which watch for diversion from commercial nuclear material flows, or by intelligence activities which can spot dedicated facilities or illegal nuclear transactions. The second level is the response to the detection of such activity in order to force its reversal and deter others from like actions. Sanctions administered by other nations are one method of response. The third level is the restriction of nuclear systems to those that present the lowest risks for proliferation. Supplier agreements can coordinate a ban on sales of enrichment and reprocessing plants and emphasize the development of new systems. The final level is creation of an international climate, through treaties and commitments, wherein nations will not want to proliferate or will find it difficult to do so for political reasons. Each of these levels has produced institutions and arrangements to perform the needed functions. Many of the components would benefit from strengthening, but together they present an effective, though not insurmountable, barrier to proliferation.

The first part of this section will survey the safeguards technology to detect diversion. The second part will discuss the various institutions and arrangements that assist in the levels of proliferation control.

Safeguards

The objective of domestic safeguards in the United States is to detect, deter, prevent, and respond to theft or sabotage by a nonstate adversary. The objective of international safeguards such as those applied by IAEA is to detect diversion of nuclear material by a nation from its own nuclear facilities. In addition, international safeguards should assist the national safeguards system in detecting nonstate diversion.

U.S. DOMESTIC SAFEGUARDS

The three basic elements of the U.S. system are physical protection, material control, and material accountancy. Physical protection elements are those that prevent unauthorized outsiders from entering a facility or seizing control of a transport vehicle, and prevent nuclear material from leaving by an unauthorized route. Examples are armed guards, barriers, and portal monitors. Material control measures consist of procedures for access to and transfer of special nuclear material. They are aimed at preventing any two insiders acting in collusion from removing nuclear material from the facility. Materials accounting for nuclear material is similar to accounting systems for other valuable materials, involving complete records of the movement of material and the taking of periodic physical inventories. The physical protection and material control systems are the primary safeguards measures in the United States.

Safeguards were not given high priority by the public or the Government until recently. Several years ago, safeguards began to attract widespread interest and increased funds were provided, but, a sudden surge of interest and money cannot quickly compensate for years of complacency.

The United States has three major nuclear programs, and three agencies (ERDA, the Nuclear Regulatory Commission (NRC), and the Department of Defense) with safeguards responsibility for these programs.

Because NRC has primary responsibility for commercial nuclear facilities, it has been the focus of this report. The NRC safeguards tasks can be considered in four classes; the first three are of present concern but the fourth allows time for further study.

1. Protection of Shipments of Privately Owned Strategic Nuclear Material.—NRC requirements on shipments of strategically significant amounts of special nuclear material (i.e., 5 kg or more of highly enriched U^{235} or 2 kg or more of plutonium or U^{233}) are currently less stringent than those recently adopted by ERDA for shipment of its own material. One critical element of effective safeguards is secure communication during transportation. ERDA has such a system (SECOM), but its use is at present restricted to transport of ERDA material. There appear to be no serious legal, economic, or institutional reasons why shippers of privately owned nuclear material cannot employ the ERDA communications and control system. Transportation security for NRC licensees would be further upgraded by the use of specially designed, penetration resistant tractor-trailers similar in performance to ERDA's and accompanied by escort vehicles.

2. Protection of Production Facilities That Possess Strategic Special Nuclear Materials.—NRC sets requirements to protect those privately owned facilities licensed for possession of strategic quantities of plutonium or highly enriched uranium. NRC also inspects the facilities to ensure license compliance to its regulations. Controversy over whether or not safeguards are presently adequate at these facilities centers around what level of threat safeguards should meet. Although this report has not assessed safeguards at specific facilities, it can make some observations about the methods of assessment now being used.

In current assessments, more attention has been given to the size of a potential nonstate adversary group than to any other single attribute. Although some historical data on size of threats are useful as a guide, an estimate of the numbers of attackers is inescapably a matter of judgment. A study in progress at the Rand Corp. suggests a range of anywhere from 7 or 8 to about 15 attackers as a prudent estimate, without speaking in terms of a maximum threat. NRC has reportedly ordered its licensees to upgrade physical security to meet a threat of two or more insiders acting in collusion with several heavily armed attackers from the outside.

In addition to numbers, other important parameters to consider are armament, tactics, and the characteristics of the facility itself. Present safeguards and physical security may place undue reliance on one element of physical security—armed guards. It is not clear how well presently designed safeguard systems can handle the problem of several insiders acting in collusion, or outsiders attacking with guile and deception rather than straightforward armed assault.

Moreover, guards at nuclear facilities presently have only civilian arrest powers, which are quite limited and vary from State to State. Serious consideration should be given to ways to clarify the power of the guards. The question of using a Federal security force to protect nuclear material needs reopening, particularly in light of the increased threat levels licensees are being required to meet.

It should also be recognized that there could be an alternative to reliance on onsite guards for standoff of an armed attack. A crucial question, which deserves serious review, is the extent to which safeguards systems can be designed to sufficiently **delay** attacking adversaries so that the burden of engagement and arrest falls on offsite response forces rather than onsite guards.

3. Protection of Power Reactors Against Sabotage.—The question of reactor sabotage was judged peripheral to the main focus of this study: the proliferation of nuclear weapons. The report has therefore not assessed the adequacy of U.S. domestic security at power reactors.

4. Protection of Future Facilities That Would Process Plutonium-Containing Fuel or Other Concentrated Weapons Material.—It is not clear whether NRC will decide to license plutonium processing facilities, or if so, when. The only such plant which could start operations within the next few years is the Allied-General Nuclear Services spent-fuel reprocessing plant at Barnwell, S.C. Other facilities to produce plutonium oxide or to fabricate plutonium for breeder reactors exist only on paper and are 5 to 10 years from completion.

Several safeguard concepts have been put forth in recent years to meet the problems posed by large-scale concentrated weapons material in processing and fabrication facilities. These are listed and briefly assessed below:

- **Massive Spiking.**—Massive spiking is the addition of lethal amounts of radioactive material to fresh fuel as a barrier to theft. Studies indicate that this technique is not cost effective compared to massive containment and stringent physical security for domestic safeguards use. Massive spiking would not be useful at all in restraint of national proliferation.
- **Light Spiking.**—Spiking of highly enriched uranium with low levels of radioactive material should be given further study.
- **Denaturing of Plutonium.**—The concept of denatured plutonium—plutonium which, because of its isotopic composition, is not suitable for explosives—is fallacious.
- **Storage and Transport of Plutonium in Dilute Mixed-Oxide Form.**—If plutonium dioxide were always mixed with a large quantity of uranium oxide, when stored and transported, its usefulness to the nonstate adversary would be considerably reduced. A group would have to steal large amounts of mixed-oxide material and undertake time-consuming chemistry to separate the plutonium. However, the dilute mixed-oxide form would constitute much less of a barrier against national diversion.
- **Colocation of Reprocessing and Fuel Fabrication Plants.**—The colocation of reprocessing plants and mixed-oxide fuel fabrication plants would eliminate the transport of pure plutonium oxide. The advantages and disadvantages of this safeguard measure have not yet been assessed in any systematic way. However, if coprecipitation is employed at the reprocessing plant so that its output is dilute plutonium oxide in uranium oxide, colocation would probably not offer significant additional safeguard advantages.
- **Advanced Materials Accounting System.**—No substantial economical improvement in the sensitivity of materials accountancy can be expected unless real-time material control can be implemented. Two such systems are being developed: SYMAC at Los Alamos Scientific Laboratory and RETIMAC by NRC at Lawrence Livermore Laboratory. Considerable development work and in-plant demonstration is required before the effectiveness and costs of real-time material control can be reliably assessed. However, even once developed, such systems. could not do the entire safeguards job. Physical security, containment, and surveillance will still play crucial roles in both domestic and international systems.
- **Integrated Safeguard Systems.**—The most effective safeguard systems would be those in which the various elements are integrated with one another and into the design of new facilities. Such systems demand not only development of hardware and computerized control but, also, development of methodologies to assess their effective-

ness against both outside attack and embezzlement by insiders. The input to this assessment must be reliable data on the individual elements of the system. It is therefore important to continue experimental programs to provide information on the penetration resistance of barriers, the reliability of alarms, and the efficacy and safety of techniques such as foams and reactive sensors that delay and confuse the adversary.

IAEA SAFEGUARDS

The objective of the IAEA safeguards systems is to detect national diversion. Materials accountancy is considered to be the safeguards measure of fundamental importance by IAEA. Containment and surveillance are regarded as important complementary measures.

The materials accountancy system is based on records and physical inventories made by the facility operator and subsequently verified by the IAEA inspector. Containment is the use of physical barriers to restrict and control access to or movement of nuclear materials. Surveillance means instrumental or human observation to detect access to or movement of nuclear material. It is generally accepted that there are unavoidable limitations on material accountancy due to measurement errors: containment and surveillance will therefore have to be assigned much greater importance in the design of safeguards.

The role of IAEA in the issue of physical security is an advisory one. Physical security systems are the prerogative of the individual nation. As part of an effort to upgrade physical security worldwide, ERDA physical-security review teams visited a large number of countries in 1975-76. The result of the visits are classified by ERDA because of the classified nature of physical security measures in foreign states: ERDA further stated that laws, regulations, and factors peculiar to each nation made it difficult to draw even general observations about the visits.

IAEA Safeguarding of Power Reactors.—It is difficult to evaluate the present effectiveness of IAEA safeguards on power reactors because information about critical IAEA procedures and policies is either not available outside the Agency or is classified by IAEA as "safeguards confidential." Some of this information may become available in the Director General's proposed special safeguards "Implementation Report to the Board of Governors." The report was expected in September 1977, after several delays totaling over a year.

On the basis of the available information, it appears credible that IAEA will develop and implement improved equipment and techniques to make undetected diversion from light water reactors or their spent fuel storage pools very unlikely. Safeguarding onload reactors, such as the CANDU which is refueled without being shut down, is substantially more difficult.

A great deal of research is being done on surveillance and containment to safeguard CANDU reactors, but not enough information is available at present for a reliable assessment. IAEA may decide to request the right to station resident inspectors at these reactors. Such a move would greatly increase IAEA costs and workload.

IAEA Safeguarding of Enrichment and Reprocessing Plants.—To date, IAEA has not safeguarded any type of enrichment plant (including pilot plant), nor has it undertaken the routine application of safeguards on a long-term basis to any commercial reprocessing plant.

As now proposed, IAEA inspection procedures for enrichment plants (especially centrifuge plants) leave open a path for a nation to obtain highly enriched uranium for weapons. The Nation might convert one section of its centrifuge plant to a high enrichment loop. Detection of this loop would be difficult: the IAEA inspector is currently denied access to the cascade area (that is, the area where the actual enrichment takes place), and is not allowed to monitor any new equipment that goes in and out of this area. Reconfiguration of the plant would have to be deduced from measurements of other inputs and outputs to the cascade area. Furthermore, materials accounting is currently not accurate enough for a large plant to assure the inspector that a significant diversion has not taken place. Despite objections that permitting IAEA inspectors inside the cascade area will expose commercial secrets, doing so would greatly enhance the effectiveness and credibility of IAEA inspection.

Present material accounting systems (both United States and IAEA) for use in large commercial reprocessing plants are not sensitive enough to reliably detect diversion of the order of tens of kilograms of plutonium. More importantly, detection may occur weeks or months after the diversion. IAEA requires materials accountancy to be supplemented by containment and surveillance measures. Advanced containment and surveillance systems are currently in the conceptual design stage. The aim is to develop systems that will be effective and reliable, indicate attempts to tamper, and eventually be able to report in real time to both a central inspector station and IAEA headquarters in Vienna. Such systems are essential to the credibility of IAEA safeguards on reprocessing plants.

IAEA will not be immediately confronted with the safeguarding of very large enrichment or reprocessing plants. Given adequate manpower, and technical and financial support, the safeguards system should be able to improve as the size of facilities under safeguards increases. It is not, however, possible to conclude at this time that this effort will be successful. There are a number of unresolved technical and political problems, any one of which might preclude truly credible safeguards against covert diversion for these types of plants.

International Institutions, Agreements, and Sanctions

Safeguards on nuclear facilities can be only as strong as the agencies that apply them, and only as effective as the responeses that enforce them. The entire climate for international safeguards is governed largely by the institutions and agreements that are described.

INTERNATIONAL ATOMIC ENERGY AGENCY AND THE EUROPEAN ECONOMIC COMMUNITY

IAEA operates a safeguards inspection system required for all nuclear material of nonnuclear weapons states party to the NPT, and on all exports by members to nonmembers. These safeguards are aimed at detecting whether a nation has diverted nuclear material from its own facilities, so an adversary attitude toward the nations is assumed. IAEA has no power to enforce physical protection, recover diverted material, or detect dedicated facilities or illegal transactions.

IAEA response to possible evidence of a national diversion is limited. The evidence initiates a sequence of reports and efforts to resolve the discrepancy. If these fail, the matter is referred to the Board of Governors, who must weigh the evidence and such factors as the effectiveness of IAEA's procedures and inspectors, the quantity and quality of missing material, and political factors within the state in order to decide whether a nation has indeed removed some nuclear material. If the Board decides this is the case it sends a report to its members and to the United Nations, but it has essentially no other recourse.

This noncompliance path has not yet been tested. If governments perceive the risks of detection to be low, however, they may be enticed to try to divert. Some of these attempts would be detected, even in an enrichment or reprocessing plant. Once a state is caught in an attempted diversion, it may apply political pressure or attempt to stall IAEA's efforts to reconcile the problem. IAEA's response to the first attempt will be especially crucial and must be strongly supported by its member states.

Besides the limited response to violations, IAEA safeguards face other problems: they are somewhat restricted by proprietary interests of many nations; they are hampered by failure of facility designs to integrate the application of safeguards; they are dependent on inspector quality and morale. On the other hand, the very acceptance by nations of IAEA inspectors in their nuclear facilities represents a considerable concession. IAEA safeguarding efforts are certainly not perfunctory and they are making a credible effort to prepare for the expanded workload ahead.

Euratom is the multinational agency of the European Economic Community that performs the safeguards functions for its member states. The Euratom safeguards system is less formally structured than the IAEA system, and Euratom's inspection rights are stronger and still exercised by its inspectors. Euratom and IAEA have been moving to coordinate their inspections, but important differences remain to be resolved.

SANCTIONS

Sanctions can be used either to deter or reverse a nation's efforts to obtain nuclear weapons. To be effective, sanctions must enjoy firm and widespread support within the international community, especially by the nuclear suppliers. Sanctions lose their credibility if they are not applied or are successfully flouted. Sanctions could include the termination of nuclear assistance or trade, a cessation of economic assistance, a general trade embargo, or termination of military support or security guarantees. Because these measures will impact differently on different countries, they must be applied on a selective basis. The history of sanctions in other cases is not encouraging, but, given a strong international norm against proliferation, the threat can be made credible. Sanctions will be an important element in proliferation constraint, but their deterrent effect can be overcome by sufficient incentives such as a threat to national survival. The defusing of proliferation pressures therefore remains a critical concern, no matter how severe the sanctions.

THE SUPPLIERS' CONFERENCE AND MULTINATIONAL FACILITIES

In 1974, after extended negotiations, 10 nuclear exporting nations announced agreement on export procedures designed to coordinate fulfillment of supplier obligations under the NPT. The designated procedures and the so-called "Trigger List" of sensitive exports represented the first major agreement on uniform regulation of nuclear exports by actual and potential nuclear suppliers. It established the principle that nuclear supplier nations should regulate the international market for nuclear materials and equipment in the interest of nonproliferation.

In response to the Indian nuclear detonation a second series of supplier negotiations began. On January 27, 1976, the seven participating nations exchanged letters endorsing a uniform code for conducting international nuclear sales. The provisions strengthened the 1974 agreement with regard to the Trigger List equipment, retransfer of exports, and physical security requirements for the protection of exported materials and facilities. The new agreement indicated the importance that nuclear supplier states attach to strengthening the international barriers against proliferation. The Conference also served to elevate the issues of nonproliferation and nuclear exports to the highest political levels within participating governments. Subsequent to the agreement, there has been a notable strengthening of the nonproliferation posture of Canada, West Germany, and even France. Previous agreements to export reprocessing facilities to Pakistan and Brazil have been cast into doubt.

There is a danger that the success of the Suppliers' Conference could lead user states to view it as a cartel designed to preserve the continued preeminance of the supplier states in the international nuclear market. The result could be a weakening of the sense of bargain which makes the NPT acceptable to many nonnuclear states.

Multinational fuel cycle facilities (MFCFs) have been proposed as a way to supply reprocessing services without having the plants under national control. This would greatly reduce opportunities for diversion by any one nation. However, MFCFs might weaken the arguments against reprocessing in general and disseminate the technology to do it. Nevertheless, MFCFs do show promise as a means of forestalling national reprocessing. A number of economic and political issues must be resolved first. IAEA is presently conducting a study addressed at many of these. Another application of the MFCF concept would be for spent-fuel storage, which would be much easier to implement than reprocessing. It would also make a clear contribution to nonproliferation while not foreclosing eventual multinational reprocessing.

THE NONPROLIFERATION TREATY

A major factor constraining nations from nuclear weapons development has been the NPT. The treaty was designed to prevent the diversion of nuclear material in commercial power systems to weapons purposes by the imposition of safeguards, and to gain a formal commitment by the nonweapons states to remain weaponless. These considerable intrusions into national sovereignty were obtained by guaranteeing access to peaceful nuclear technology and obligating the weapons states to pursue disarmament. Over 100 nations have ratified the NPT, but some of the key countries have not. The greater restrictions on nonweapons states compared to weapons states has caused some discontent, as has the lack of progress toward nuclear disarmament. The NPT prevents only its ratifiers from developing weapons, and parties can, under extraordinary circumstances, withdraw on only 3 months' notice and quite legally produce their own. Nevertheless, it is a significant deterrent in that most members would find it politically difficult to resign, and it has helped create a climate that makes proliferation an act outside the pale of international propriety.

Comparison of Routes to Nuclear Materials

The two previous sections have described three routes to obtain fissionable nuclear material suitable for weapons, and the restraints on those routes. The route that would be selected by a particular nation or nonstate adversary will depend on various characteristics of the country concerned:

1. **Technological Capability.**—If its ability is high, a nation can consider any route. A low capability limits the proliferator to a purchase or theft.
2. **Availability of Nuclear Facilities.**—The ability of a proliferator to divert nuclear material depends on the type of facility it owns or can readily acquire.
3. **Urgency of Need.**—If the proliferator must have the weapons on a short time-scale, it may have to openly abrogate safeguards on its own nuclear facilities or obtain weapons by purchase or theft.
4. **Critical Resources.**—If a nation has large quantities of uranium, it would be less vulnerable to sanctions if caught diverting and less liable to be detected if it constructs a dedicated facility.
5. **Political Relationships.**—Acceptance of safeguards or vulnerability to sanctions will, at least, force a nation to travel a route with the least chance of detection. On the other hand, alliance with a more

advanced nation may provide the nation with technology or resources for a dedicated facility.

6. **Perceptions of Controls.**—If a nation perceives safeguards to be effective, it will be less likely to attempt diversion.

The interaction of all these factors will determine the optimal pathway each nation or subnational group would use to obtain nuclear weapons. This interaction will be strongly influenced by the particular objectives a nuclear weapons program is designed to serve. In chapter VI, four such objectives were identified:

- nations desiring a major weapons force;
- nations satisfied with a smaller, perhaps less sophisticated force;
- nations wishing the option of rapid development of nuclear weapons in the future; and
- nonstate adversaries limited to a few crude devices.

A major weapons program can be defined as one that produced at least 10 high-quality weapons per year. Only a country with a relatively extensive technological base can realistically consider such a program. Such a nation would not select a route as unreliable or intermittent as an illegal nuclear market. It could pursue either of the other two routes, but would probably be unable to keep its intentions secret for long. The diversion of sufficient quantities of nuclear material from a commercial nuclear power program would necessitate open abrogation of safeguards, unless the nation already had an unsafeguarded facility. Sanctions such as nuclear embargoes might effectively hamper a nation from continuing along this route unless it had its own uranium reserves and a natural uranium or fast breeder reactor. Construction of a plutonium production reactor dedicated to production of weapons material might have more appeal, in that it would be legal for a nation that is not a party to the NPT, and its production capabilities could be kept secret even if the existence of the facility itself could not be.

The nation that wants a small number of unsophisticated weapons might procure the material from any of the three routes. If it needed the weapons quickly it might purchase the required goods on a black or gray market, if available, or might consider overt diversion from a reprocessing or enrichment plant. If its needs are not urgent, a country might be able to obtain the nuclear materials secretly. If it owned a reprocessing plant it might be able to covertly divert sufficient material. The country might, however, be unwilling to risk detection if it perceived the safeguards to be effective. In that case it could construct a plutonium production reactor, especially if uranium were available. The reactor would be on such a small scale that it could easily escape detection. A final alternative for a country that possesed a centrifuge enrichment plant would be to rework a portion of it into a high enrichment loop or to build a small "add on" to the existing plant.

The nation wishing only an option for future nuclear weapons development might require commercial nuclear power reactors with eventual diversion in mind. A reprocessing plant would be essential for it to extract the weapons material from spent reactor fuel. If it could not obtain such a facility, it might build one of its own to hold in reserve. A small reprocessing plant for weapons is far easier to design and build than a commercial plant.

The nonstate adversary can obtain nuclear material either by black market transactions or by armed attack on shipments or stockpiles of plutonium in commercial power program. The nonstate adversary would probably not be able to use material from other points in the fuel cycle because construction of the facilities required to convert such material to weapons grade most likely would be beyond the group's capabilities.

This brief analysis shows that all three routes are plausible under some conditions. The least predictable is purchase/theft. If such a route comes into existence, it could satisfy three of the four categories of proliferators. It might also serve the major force nation wanting a few bombs in hand to forestall the preemptive attack that might occur if its intentions became known before its program was complete. Hence, a high priority must be given to controlling this type of transaction. Diversion from commercial power systems can be largely controlled if Nth countries do not have their own reprocessing or enrichment plants. A reprocessing plant in particular provides instant access to weapons material for any nation willing to abrogate its safeguards agreement and many opportunities for covert diversion by those that are not. The dedicated facility route is the least subject to control. Many nations are capable of this route because of ready access to sufficiently detailed plants and the availability of the modest resource requirements. One of its few disadvantages is its high cost which is not offset by power production. More attention should be directed to possible means of detecting those nations embarked on a dedicated facility route.

International Nuclear Industry

Control of nuclear weapons proliferation depends to a large extent on the nature and scope of the future international nuclear industry. Key factors to understand are the real and perceived need for nuclear energy in general, and for proliferation-prone facilities (such as breeders or reprocessing plants) in particular. Also important are the motivations of and relationship between the nuclear suppliers, as these will determine the efficacy of any attempts to control proliferation.

Nuclear power has been widely expected to replace oil and gas as a major energy source to meet the growing consumption of most nations, especially as production of these fossil fuels decline and their prices rise. Expectations for nuclear energy were boosted by the oil price increases in 1973, but have fallen sharply since then; costs for nuclear plants and fuels have risen as demand has fallen, and opposition to them has grown in many countries.

Nuclear energy is mainly suited to the production of electricity, the form of energy with the highest growth rate. Although electricity may be inappropriate for many applications, such as low-temperature heat, the very high growth rate worldwide results from strong social and economic forces that will not be quickly and easily reversed. Some nuclear powerplants can be replaced by coal plants. World coal resources are many times that of oil, but the costs of extracting, transporting, and using vastly increased quantities of coal in an environmentally acceptable manner may be very high.

The perceived need for nuclear power varies from country to country and depends on many factors. Nuclear power is chiefly appropriate for a nation having a large and growing electricity demand and no cheap alternatives, including conservation. A number of industrialized nations fit this description. Less developed countries (LDCs) may want nuclear power to diversify their energy sources or to provide for a future when there may be no alternative. However, the LDCs may also find their financial resources are too limited, their electric grids too small, and their technical infrastructure too immature to support such a large and complex power source. The disadvantages may be great enough so that LDCs should be encouraged to find alternatives (such as imported coal), especially those LDCs that are considered high proliferation risks.

In the face of such variable factors governing the need for nuclear power, projections of its growth are very uncertain. The most recent official estimate is one that ERDA produced in 1976, by modifying downward a projection by IAEA and the Office of Economic Cooperation and Development (OECD). The results are as follows:

World Nuclear Capacity (1,000 MW)

	Year 1975	*1980*	*1985*	*1990*	*2000*
United States..........	39	67	145	250	510
Other nations..........	29	100	230	425	1030
Total	68	167	375	675	1540

These figures are considerably lower than previous projections, and many observers expect this trend to continue. Actual installed capacity could be substantially lower. Those LDCs with a heavy commitment to nuclear power are Brazil, Argentina, Mexico, India, Iran, Taiwan, and Korea. Several others expect to be heavily dependent by 2000.

Possession of a nuclear reactor alone, especially if it is safeguarded, does not greatly facilitate the acquisition of nuclear materials for a national weapons program. Other elements in the nuclear fuel cycle impinge more heavily on proliferation control: the availability of uranium supplies affects the need for reprocessing plants and the breeder reactor; the capacity for enriching uranium will influence such measures as guaranteed fuel supplies; the dissemination of enrichment and reprocessing facilities gives their operators the means to produce weapons materials and also reduces their vulnerability to international sanctions. The supply and demand for all those items must be well understood.

Uranium reserves as presently estimated should not constrain the nuclear power growth projected above until about 2000. At about that time, it may become impossible to guarantee a lifetime supply for new reactors unless a new source of fuel has been determined. This could come from breeder reactors or from new technology that permits the extraction of low grade ores not now counted as economically recoverable. If growth in the demand for nuclear power is substantially lower than presently anticipated or if, as some expect, uranium resources are much larger than projected by IAEA, there will be no constraint until well into the next century.

More enrichment capacity may be needed by the late 1980's, but there appears to be no inherent difficulty in supplying this. The timing of the need for spent fuel reprocessing is much less clear. Plants are now being built in the United States, Europe, and Japan, but capacity is far below need if all fuel is to be reprocessed. Unlike enrichment, reprocessing is not a vital part of the LWR fuel cycle. Justification for reprocessing as a means to extend fuel supplies may evaporate if nuclear growth slows or if uranium reserves prove adequate. The plants could be indigenously developed by many countries if desired, however. Consequently, export bans on reprocessing plants would be less effective than those on enrichment facilities.

The U.S. share of the total reactor export market has dropped sharply in recent years, as other suppliers have emerged and as U.S. policy has both restricted certain exports and engendered doubts as to the reliability of American commitments. The competition among the nuclear suppliers is quite keen, especially as many of them need a foreign market to fill their excess manufacturing capacity. If the United States unilaterally withdrew from the market, the other suppliers are capable of quickly filling the void.

The suppliers of reactors and enrichment services are as follows:

Reactors

United States
Canada
West Germany
United Kingdom[a]
France
Sweden[a]
Italy[a]
Japan[a]
U.S.S.R.

Enrichment

United States
U.S.S.R.
France
United Kingdom
Netherlands[b]
Japan (proposed)
South Africa (proposed)
Brazil (proposed)

[a] Not expected to be major exporter.
[b] Location of URENCO trilateral facility.

If the United States, as expected, continues to export reactors and associated equipment as well as engineering, construction, and enrichment services, the export value will total about $2 billion per year until 1990, with possible variations depending on the policies of other supplier and importing nations.

Policy Implications

Perspectives

The growing debate over policy concerning proliferation hinges in large part on differing perceptions of the problem. There are three basic issues in dispute.

1. Is reliance on nuclear power to meet national and global energy needs unavoidable, or can adequate alternative sources of energy be developed?
2. Must the spread of nuclear power inevitably result in the proliferation of nuclear weapons, or can that potential linkage be broken?
3. Does proliferation really constitute a serious problem from the perspective of U.S. interests? Based on different answers to these questions, three major overviews or perceptions of the proliferation problem can be identified.

The first perspective rests on the basic assumption that reliance on nuclear energy is unavoidable and proliferation may be inevitable, but the latter need not pose a serious threat to vital U.S. interests. There is a corollary view that proliferation will occur only slowly, if at all. In either case, exaggerated fears concerning proliferation should not be allowed to jeopardize real U.S. interests, which involve the development of nuclear power as an energy source and the restoring of American preeminence in the global market for nuclear facilities, fuel services, and technology. This would require the United States, inter alia, to initiate commercial reprocessing, and to expand its enrichment capacity to service overseas customers and encourage rather than constrain nuclear exports. Moreover, if the United States seeks to exert effective leverage in support of nonproliferation objectives, it must do so from a position of predominance in international nuclear nuclear commerce.

The second perspective begins by accepting the proposition that there is an indissoluble link between the spread of civilian nuclear energy and proliferation. Where the previous perspective adjudges the need for nuclear energy as overriding and imperative, this perspective disagrees and assigns primary importance to containing proliferation—which is seen as posing a lethal threat to United States and global security. Since proliferation can only be stopped if the growth of the nuclear industry is curtailed, the primary task of policy is to deemphasize the use of nuclear power as an energy source and to develop alternatives. The alternatives would consist of developing coal as a transitional fuel, and long-term reliance on such renewable and environmentally benign energy sources as solar, wind, and organic conversion supplemented by conservation and recycling.

The third perspective assumes that the potential linkage between civilian nuclear energy and proliferation can be broken, i.e., it is possible to obtain the benefits of the commercial atom without entering into a Faustian bargain involving the spread of nuclear arms. This will require policies designed to:

- Promote an international political climate in which the incentive to "go nuclear" is minimized.
- Improve national and international institutions and procedures through which nuclear facilities and materials can be effectively safeguarded against national and subnational diversion.
- Strengthen national and international controls over the availability of weapons-grade nuclear material and the technology and facilities required to produce it.
- Develop and apply sanctions designed to reverse any proliferation which does occur and to deter other would-be proliferators.
- Develop reactors and facilities which, due to their technological characteristics, are inherently less susceptible to use for weapons-related purposes.

Pursuant to these objectives, a wide range of policies have been proposed or actually implemented (enumerated below). While some of the following policies will be cogenial to advocates of all three major perspectives, this inventory is associated primarily with proponents of the third perspective, because the premise that nuclear energy and weapons can be decoupled opens the way for a detailed consideration of policies to achieve that result.

To be successful, policies must affect either the motivation of a Nth country contemplating the nuclear weapons option or the availability of materials and technology required. The former class of policies will be designated demand policies and the latter supply policies.

Demand Policies

One group of demand policies are those designed to weaken the incentives toward proliferation by nonweapon states. These include efforts to:

- Strengthen the security of Nth countries by means of a declaration by the nuclear weapon states foreswearing the use of such weapons againt any nonnuclear state, security guarantees, alliances, deployment of U.S. troops and military facilities overseas, military assistance, and the overseas deployment of U.S. nuclear weapons and delivery systems.
- Reduce the prestige associated with a nuclear weapons capability by superpower arms control agreements; by dampening the rhetoric of the strategic balance and the accompanying impression that the United States views nuclear weapons as the sine qua non of its own security; and by attempts to increase the salience of conventional armaments and nonmilitary instruments of power.
- Resolve international disputes in which one of the protagonists might conclude that a favorable outcome could be achieved with the acquisition of nuclear weapons.

Attempts to implement these proposals will encounter a number of difficulties, the most serious being that they may conflict with other important U.S. foreign policy objectives, including attempts to scale down American military and security involvements overseas.

Other demand policies seek to strengthen the disincentives that confront Nth countries contemplating the nuclear weapons option. These include efforts to:

- Maintain the high technical and economic costs of acquiring nuclear weapons by subjecting all transfers of sensitive nuclear technology, materials, and facilities to strict controls.
- Increase the political costs by reinforcing the existing international norm against proliferation.
- Provide the external conditions (e.g., economic assistance) that would tend to strengthen the hand of those domestic political forces within Nth countries opposed to the nuclear weapons option.
- Develop sanctions designed to raise the costs (economic, political, or security) of any decision to acquire nuclear weapons. Examples include a cutoff of nuclear materials and assistance, a curtailment of bilateral economic and military assistance, a U.N.-imposed trade embargo, and even the threat of military force.

A variety of difficulties will confront any effort to implement these policies—the most serious being a nationalistic reaction on the part of the target states. This will be particularly true in the case of sanctions imposed by one or both of the superpowers. Under the circumstances, accusations of imperialism, neocolonialism, and great power hegemony will be unavoidable. These considerations suggest the limitations of unilaterally imposed disincentives and sanctions. Sanctions will generally make their most effective contribution to a nonproliferation strategy if they are applied in the context of a collaborative effort. The effectiveness of even multilateral disincentives and sanctions is not assured. For the majority of nations possessing limited economic and technological capabilities and lacking an indigenous uranium supply, strong multilateral measures will probably suffice to foreclose the nuclear option for the foreseeable future. On the other hand there are nations, like Argentina, which possess or soon will possess the requisite capabilities and indigenous uranium sources. If Argentina decides to produce nuclear weapons, the international community can raise the cost but probably cannot prevent it short of a resort to military coercion.

Supply Policies

There are several major categories of supply policies. The first involves controls over exports of nuclear materials, technology, and facilities. The major provisions agreed to at the Suppliers' Conference have already been outlined. A number of steps might be taken to strengthen that agreement, including a requirement that importers accept full fuel cycle safeguards (or NPT membership) and that a combination of automatic and presumptive predetermined graded sanctions be imposed in the event a recipient state violates or abrogates the terms of an export agreement. Related steps might involve the creation of an international exporters cartel with guaranteed market shares, so as to prevent export competition at the expense of safeguards, and the imposition of particularly stringent controls over exports to high risk areas (e.g., the Middle East).

Export controls are difficult to implement successfully. Not only must the natural rivalry of exporters be dampened, but importers must be persuaded that the terms are fair and the burden acceptable. If not, they may evade controls by constructing national nuclear facilities—the worst possible outcome from a nonproliferation perspective. In areas prone to conflict and instability even extraordinary safeguards and other precautions may prove ineffective.

A second major category of supply policies encompasses efforts to control the spread of reprocessing plants. It is generally agreed that diffusion of national reprocessing facilities will significantly increase opportunities for proliferation, but there are two schools of thought concerning what policies should be adopted to deal with the situation. The first, a "containment" view, rests on the assumption that the growth of a global reprocessing industry is virtually inevitable and can only be contained and managed. Specifically, reprocessing plants can be confined to the present supplier countries and multinational fuel cycle centers. A strategy designed to achieve this outcome might include some of the following elements: 1) steps to reestablish the United States as a reliable international supplier of low-enriched reactor fuel and spent fuel services; 2) an agreement by all suppliers to refrain from the export of both plutonium and reprocessing facilities and technology; and 3) establishment of an international spent fuel regime under existing IAEA statutory authority. If the containment approach is judged inadequate, the logical alternative is to eliminate reprocessing entirely. Proponents of this approach are generally convinced that the spread of reprocessing/recycle is not inevitable, and that its proliferation-related costs outweigh any energy benefits. A policy to implement this approach would comprise the same elements as for containment, with two exceptions: 1) plans for domestic civilian reprocessing would be suspended until the exhaustion of commercially usable uranium reserves, and 2) alternate fuel cycles, alternate reactor types, and technologies for extracting the energy in spent fuel without separating plutonium would be explored on a high priority basis.

Both these approaches will have to overcome major obstacles with regard to waste disposal and political resistance on the part of U.S. public opinion (e.g., with regard to the expense of the program). An attempt to institute a global moratorium on reprocessing will encounter strong objections from European supplier nations and Japan which are already committed to reprocessing.

Enrichment controls constitute a third type of supply policy. Like reprocessing, enrichment technology and facilities provide a means of acquiring bomb-grade material. Unlike reprocessing, maintenance of an adequate enrichment capacity cannot be avoided if the civilian nuclear energy industry is to meet the rising demand for electrical power. The proliferation potential in an expansion of enrichment capacity can be dealt with in two ways: by supplier controls over exports of technology and facilities, and by confining enrichment plants to the existing supplier states or multinational centers.

A fourth set of supplier policies concerns efforts to strengthen the nonproliferation regime. This would involve policies designed to make a commitment to nonproliferation more attractive to nonnuclear weapon states on the one hand, and steps to strengthen the control aspects of the regime on the other. In the former category are the following initiatives: 1) negotiate a comprehensive test ban and a new strategic arms control agreement by the superpowers; 2) accord preferential treatment to NPT signatories (e.g., concerning enrichment services); and 3) expand the participation of nonnuclear states in decisions regarding peaceful nuclear activities within an international framework. Policies in the latter, or control, category include: 1) link nuclear exports and economic aid to adherence to the NPT by the recipient state; 2) strengthen IAEA safeguards (e.g., by extending the application of existing safeguards to prevent intelligence efforts and capabilities with regard to proliferation; and 3) encourage the creation of nuclear-free zones in appropriate regions.

Other major types of supply policies include: 1) global and regional arrangements, including multinational fuel cycle centers and schemes for the internationalization of various stages of the fuel cycle; 2) assistance to other countries in the development of nonnuclear energy sources; 3) technological measures including efforts to develop a nonproliferating reactor; and 4) measures to neutralize the nonstate adversary threat, including efforts to upgrade physical security measures in the United States and abroad.

Policy Implementation

A taxonomy of available policies has been presented. The next logical step is to order those policies in terms of either their priority or the logical time sequence in which they might be addressed. In a simple three-stage time sequence, the criteria for distinguishing between the categories might be urgency, time required for implementation, and feasibility (in terms of technical difficulty, economic and political cost, and whether the desired initiative can be taken unilaterally by the United States or whether it requires collateral actions by other governments).

A preliminary effort to categorize major policy areas in terms of these criteria produced the following ranking (in terms of priority):

Stage I:
- Export controls
- Enrichment
- Strengthen national intelligence capabilities
- Forego plutonium recycle

Stage II:
- Contain plutonium recycle
- Weaken incentives
- Strengthen disincentives

Neutralize nonstate adversaries
Assistance regarding nonnuclear energy sources
Strengthen the nonproliferation regime
Sanctions
International spent-fuel shortage regime

Stage III:

Global and regional arrangements

Existing bilateral and international agreements impose constraints upon policy. Nevertheless, the choice, both at general and specific levels of policy, remains open to a significant degree. However, projected growth rates in the global nuclear industry, trends in international politics, and imminent technological innovations threaten to foreclose major options. It will continue a major failure of our public institutions if the choice is made by default—a mindless product of the course of events. When the stakes are so high, it is imperative that the choice be conscious and informed.

NOTE: Copies of the full report "Nuclear Proliferation and Safeguards" can be purchased from Praeger Publishing Co., New York, N.Y. Please direct all purchase orders to Holt, Rinehart and Winston, 383 Madison Avenue, New York, N.Y. 10017, $21.50, hardbound. NTIS order # PB 275 843; $21.00.

Copies of Volume II, Appendix: Nuclear Proliferation and Safeguards—Parts One and Two are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, Va., 22161. This is a two part volume containing background data. Vol. II, Part 1: NTIS order # PB 275 844; $40.50. Vol. II, Part 2: NTIS order # PB 275 845; $39.00.

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The Spread of Nuclear Weapons: More May Be Better

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The Spread of Nuclear Weapons: More May Be Better

INTRODUCTION

What will the spread of nuclear weapons do to the world? I say 'spread' rather than 'proliferation' because so far nuclear weapons have proliferated only vertically as the major nuclear powers have added to their arsenals. Horizontally, they have spread slowly across countries, and the pace is not likely to change much. Short-term candidates for the nuclear club are not very numerous, and they are not likely to rush into the nuclear military business. Nuclear weapons will nevertheless spread, with a new member occasionally joining the club. Counting India and Israel, membership grew to seven in the first 35 years of the nuclear age. A doubling of membership in this decade would be surprising. Since rapid changes in international conditions can be unsettling, the slowness of the spread of nuclear weapons is fortunate.

Someday the world will be populated by ten or twelve or eighteen nuclear-weapon states (hereafter referred to as nuclear states). What the further spread of nuclear weapons will do to the world is therefore a compelling question.

Most people believe that the world will become a more dangerous one as nuclear weapons spread. The chances that nuclear weapons will be fired in anger or accidentally exploded in a way that prompts a nuclear exchange are finite, though unknown. Those chances increase as the number of nuclear states increase. More is therefore worse. Most people also believe that the chances that nuclear weapons will be used vary with the character of the new nuclear states – their sense of responsibility, inclination toward peace, devotion to the *status quo*, political stability, and administrative competence. If the supply of states of good character is limited, as is widely thought, then the larger the number of nuclear states, the greater the chances of nuclear war become. If nuclear weapons are acquired by countries whose governments totter and frequently fall, should we not worry more about the world's destruction than we do now? And if nuclear weapons are acquired by two states that are traditional and bitter rivals, should that not also foster our concern?

Predictions on grounds such as the above point less to likelihoods and more to dangers that we can all imagine. They identify some possibilities among many, and identifying more of the possibilities would not enable one to say how they are likely to unfold in a world made different by the slow spread of nuclear weapons. We want to know both the likelihood that new dangers will manifest themselves and what the possibilities of their mitigation may be. We want to be able to see the future world, so to speak, rather than merely imagining ways in which it may be a better or a worse one. How can we predict more surely? In two ways: by deducing expectations from the structure of the international political system and by inferring expectations from past events and patterns. With those two tasks accomplished in the first part of this paper, I shall ask in the second part whether increases in the number of nuclear states will introduce differences that are dangerous and destabilizing.

I. DETERRENCE IN A BIPOLAR WORLD

The world has enjoyed more years of peace since 1945 than had been known in this century – if peace is defined as the absence of general war among the major states of the world. The Second World War followed the first one within twenty-one years. As of 1980, 35 years had elapsed since the Allies' victory over the Axis powers. Conflict marks all human affairs. In the past third of a century, conflict has generated hostility among states

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and has at times issued in violence among the weaker and smaller ones. Even though the more powerful states of the world have occasionally been direct participants, war has been confined geographically and limited militarily. Remarkably, general war has been avoided in a period of rapid and far-reaching changes – decolonization; the rapid economic growth of some states; the formation, tightening, and eventual loosening of blocs; the development of new technologies, and the emergence of new strategies for fighting guerrilla wars and deterring nuclear ones. The prevalence of peace, together with the fighting of circumscribed wars, indicates a high ability of the post-war international system to absorb changes and to contain conflicts and hostility.

Presumably features found in the post-war system that were not present earlier account for the world's recent good fortune. The biggest changes in the post-war world are the shift from multipolarity to bipolarity and the introduction of nuclear weapons.

The Effects of Bipolarity

Bipolarity has produced two outstandingly good effects. They are seen by contrasting multipolar and bipolar worlds. First, in a multipolar world there are too many powers to permit any of them to draw clear and fixed lines between allies and adversaries and too few to keep the effects of defection low. With three or more powers, flexibility of alliances keeps relations of friendship and enmity fluid and makes everyone's estimate of the present and future relation of forces uncertain. So long as the system is one of fairly small numbers, the actions of any of them may threaten the security of others. There are too many to enable anyone to see for sure what is happening, and too few to make what is happening a matter of indifference.

In a bipolar world, the two great powers depend militarily mainly on themselves. This is almost entirely true at the strategic nuclear level, largely true at the tactical nuclear level, and partly true at the conventional level. In 1978, for example, the Soviet Union's military expenditures were over 90% of the total for the Warsaw Treaty Organization, and those of the United States were about 60% of the total for NATO.[1] With a GNP 30% as large as ours, West Germany's expenditures were 11.5% of the NATO total, and that is the second largest national contribution.[2] Not only do we carry the main military burden within the alliance because of our disproportionate resources but also because we contribute disproportionately from those resources. In fact if not in form, NATO consists of guarantees given by the United States to her European allies and to Canada. The United States, with a preponderence of nuclear weapons and as many men in uniform as the West European states combined, may be able to protect them; they cannot protect her.

Because of the vast differences in the capabilities of member states, the roughly equal sharing of burdens found in earlier alliance systems is no longer possible. The United States and the Soviet Union balance each other by 'internal' instead of 'external' means, relying on their own capabilities more than on the capabilities of allies. Internal balancing is more reliable and precise than external balancing. States are less likely to misjudge their relative strengths than they are to misjudge the strength and reliability of opposing coalitions. Rather than making states properly cautious and forwarding the chances of peace, uncertainty and miscalculation cause wars.[3] In a bipolar world, uncertainty lessens and calculations are easier to make. The military might of both great powers makes quick and easy conquest impossible for either, and this is clearly seen. To respond rapidly to fine changes in the military balance is at once less important and more easily done.

Second, in the great-power politics of a multipolar world, who is a danger to whom, and who can be expected to deal with threats and problems, are matters of uncertainty. Dangers are diffused, responsibilities blurred, and definitions of vital interest easily obscured. Because who is a danger to whom is often unclear, the incentive to regard all disequilibrating changes with concern and respond to them with whatever effort may be required is weakened. To respond rapidly to fine changes is at once more difficult, because of blurred responsibilities, and more important, because states live on narrow margins. Interdependence of parties, diffusion of dangers, confusion of responses: These are the characteristics of great-power politics in a multipolar world.

In the great-power politics of a bipolar world, who is a danger to whom is never in doubt. Moreover, with only two powers capable of acting on a world scale, anything that happens anywhere is potentially of concern to both of them. Changes may affect each of the two powers differently, and this means all the more that few changes in the world at large or within each other's national realm are likely to be thought irrelevant. Self-dependence of parties, clarity of dangers, certainty about who has to face them: These are characteristics of great-power politics in a bipolar world. Because responsibility is clearly fixed, and because relative power is easier to estimate, a bipolar world tends to be more peaceful than a multipolar world.[4]

Will the spread of nuclear weapons complicate international life by turning the bipolar world into a multipolar one? The bipolar system has lasted more than three decades because no third state has developed capabilities comparable to those of the United States and the Soviet Union. The United States produces about a quarter of the world's goods, and the Soviet Union about half as much. Unless Europe unites, the United States will remain economically well ahead of other states. And although Japan's GNP is fast approaching the Soviet Union's, Japan is not able to compete militarily with the super-powers. A state becomes a great power not by military or economic capability alone but by combining political, social, economic, military, and geographic assets in more effective ways than other states can.

In the old days weaker powers could improve their positions through alliance by adding the strength of foreign armies to their own. Cannot some of the middle states do together what they are unable to do alone? For two decisive reasons, the answer is 'no'. First, nuclear forces do not add up. The technology of warheads, of delivery vehicles, of detection and surveillance devices, of command and control systems, count more than the size of forces. Combining separate national forces is not much help. Second, to reach top technological levels would require full collaboration by, say, several European states. To achieve this has proved politically impossible. As de Gaulle often said, nuclear weapons make alliances obsolete. At the strategic level he was right.

States fear dividing their strategic labours fully – from research and development through production, planning, and deployment. This is less because one of them might in the future be at war with another, and more because anyone's decision to use the weapons against third parties might be fatal to all of them. Decisions to use nuclear weapons may be decisions to commit suicide. Only a national authority can be entrusted with the decision, again as de Gaulle always claimed. Only by merging and losing their political identities can middle states become great powers. The non-additivity of nuclear forces means that in our bipolar world efforts of lesser states cannot tilt the strategic balance.

Great powers are strong not simply because they have nuclear weapons but also because their immense resources enable them to generate and maintain power of all types, military and other, at strategic and tactical levels. Entering the great-power club was easier when great powers were larger in number and smaller in size. With fewer and bigger ones, barriers to entry have risen. The club will long remain the world's most exclusive one. We need not fear that the spread of nuclear weapons will turn the world into a multipolar one.

The Effects of Nuclear Weapons

Nuclear weapons have been the second force working for peace in the post-war world. They make the cost of war seem frighteningly high and thus discourage states from starting any wars that might lead to the use of such weapons. Nuclear weapons have helped maintain peace between the great powers and have not led their few other possessors into military adventures.[5] Their further spread, however, causes widespread fear. Much of the writing about the spread of nuclear weapons has this unusual trait: It tells us that what did *not* happen in the past is likely to happen in the future, that tomorrow's nuclear states are likely to do to one another what today's nuclear states have not done. A happy nuclear past leads many to expect an unhappy nuclear future. This is odd, and the oddity leads me to believe that we should reconsider how weapons affect the situation of their possessors.

The Military Logic of Self-Help Systems

States coexist in a condition of anarchy. Self-help is the principle of action in an anarchic order, and the most important way in which states must help themselves is by providing for their own security. Therefore, in weighing the chances for peace, the first questions to ask are questions about the ends for which states use force and about the strategies and weapons they employ. The chances of peace rise if states can achieve their most important ends without actively using force. War becomes less likely as the costs of war rise in relation to possible gains. Strategies bring ends and means together. How nuclear weapons affect the chances for peace is seen by considering the possible strategies of states.

Force may be used for offence, for defence, for deterrence, and for coercion. Consider offence first. Germany and France before World War I provide a classic case of two adversaries each neglecting its defence and both planning to launch major attacks at the outset of war. France favoured offence over defence, because only by fighting an offensive war could Alsace-Lorraine be reclaimed. This illustrates one purpose of the offence: namely, conquest. Germany favoured offence over defence, believing offence to be the best defence, or even the only defence possible. Hemmed in by two adversaries, she could avoid fighting a two-front war only by concentrating her forces in the West and defeating France before Russia could mobilize and move effectively into battle. This is what the Schlieffen plan called for. The Plan illustrates another purpose of the offence: namely, security. Even if security had been Germany's only goal, an offensive strategy seemed to be the way to obtain it.[6]

The offence may have either or both of two aims: conquest and security. An offence may be conducted in either or in some combination of two ways: preventively or pre-emptively. If two countries are unequal in strength and the weaker is gaining, the stronger may be tempted to strike before its advantage is lost. Following this logic, a country with nuclear weapons may be tempted to destroy the nascent force of a hostile country. This would be preventive war, a war launched against a weak country before it can become disturbingly strong. The logic of pre-emption is different. Leaving aside the balance of forces, one country may strike another country's offensive forces to blunt an attack that it presumes is about to be made. If each of two countries can eliminate or drastically reduce the other's offensive forces in one surprise blow, then both of them are encouraged to mount sudden attacks, if only for fear that if one does not, the other will. Mutual vulnerability of forces leads to mutual fear of surprise attack by giving each power a strong incentive to strike first.

French and German plans for war against each other emphasized prevention over pre-emption – to strike before enemies can become fully ready to fight, but not to strike at their forces in order to destroy them before they can be used to strike back. Whether pre-emptive or preventive, an offensive first strike is a hard one, as military logic suggests and history confirms. Whoever strikes first does so to gain a decisive advantage. A pre-emptive strike is designed to eliminate or decisively reduce the opponent's ability to retaliate. A preventive strike is designed to defeat an adversary before he can develop and deploy his full potential might. Attacks, I should add, are not planned according to military logic alone. Political logic may lead a country another country to attack even in the absence of an expectation of military victory, as Egypt did in October of 1973.

How can one state dissuade another state from attacking? In either or in some combination of two ways. One way to counter an intended attack is to build fortifications and to muster forces that look forbiddingly strong. To build defences so patently strong that no one will try to destroy or overcome them would make international life perfectly tranquil. I call this the defensive ideal. The other way to inhibit a country's intended aggressive moves is to scare that country out of making them by threatening to visit unacceptable punishment upon it. 'To deter' literally means to stop someone from doing something by frightening him. In contrast to dissuasion by defence, dissuasion by deterrence operates by frightening a state out of attacking, not because of the difficulty of launching an attack and carrying it home, but because the expected reaction of the attacked will result in one's own severe punishment. Defence and deterrence are often confused. One frequently hears statements like this: 'A strong defence in Europe will deter a Russian attack'. What is meant is that a strong defence will dissuade Russia from attacking. Deterrence is achieved not through the ability to defend but through the ability to punish. Purely deterrent forces provide no defence. The message of a deterrent strategy is this: 'Although we are defenceless, if you attack we will punish you to an extent that more than cancels your gains'. Second-strike nuclear forces serve that kind of strategy. Purely defensive forces provide no deterrence. They offer no means of punishment. The message of a defensive strategy is this: 'Although we cannot strike back, you will find our defences so difficult to overcome that you will dash yourself to pieces against them'. The Maginot Line was to serve that kind of strategy.[7]

States may also use force for coercion. One state may threaten to harm another state not to deter it from taking a certain action but to compel one. Napoleon III threatened to bombard Tripoli if the Turks did not comply with his demands for Roman Catholic control of the Palestinian Holy Places. This is blackmail, which can now be backed by conventional and by nuclear threats.

Do nuclear weapons increase or decrease the chances of war? The answer depends on whether nuclear weapons permit and encourage states to deploy forces in ways that make the active use of force more or less likely and in ways that promise to be more or less destructive. If nuclear weapons make the offence more effective and the blackmailer's threat more compelling, then nuclear weapons increase the chances of war – the more so the more widely they spread. If defence and deterrence are made easier and more reliable by the spread of nuclear weapons, we may expect the opposite result. To maintain their security, states must rely on the means they can generate and the arrangements they can make for themselves. The quality of international life therefore varies with the ease or the difficulty states experience in making themselves secure.

Weapons and strategies change the situation of states in ways that make them more or less secure, as Robert Jervis has brilliantly shown.[8] If weapons are not well suited for conquest, neighbours have more peace of mind. According to the defensive–deterrent ideal, we should expect war to become less likely when weaponry is such as to make conquest more difficult, to discourage pre-emptive and preventive war, and to make coercive threats less credible. Do nuclear weapons have those effects? Some answers can be found by considering how nuclear deterrence and how nuclear defence may improve the prospects for peace.

First, wars can be fought in the face of deterrent threats, but the higher the stakes and the closer a country moves toward winning them, the more surely that country invites retaliation and risks its own destruction. States are not likely to run major risks for minor gains. Wars between nuclear states may escalate as the loser uses larger and larger warheads. Fearing that, states will want to draw back. Not escalation but de-escalation becomes likely. War remains possible, but victory in war is too dangerous to fight for. If states can score only small gains, because large ones risk retaliation, they have little incentive to fight.

Second, states act with less care if the expected costs of war are low and with more care if they are high. In 1853 and 1854, Britain and France expected to win an easy victory if they went to war against Russia. Prestige abroad and political popularity at home would be gained, if not much else. The vagueness of their plans was matched by the carelessness of their acts. In blundering into the Crimean War they acted hastily on scant information, pandered to their people's frenzy for war, showed more concern for an ally's whim than for the adversary's situation, failed to specify the changes in behaviour that threats were supposed to bring, and inclined towards testing strength first and bargaining second.[9] In sharp contrast, the presence of nuclear weapons makes states exceedingly cautious. Think of Kennedy and Kruschev in the Cuban missile crisis. Why fight if you can't win much and might lose everything?

Third, the question demands a negative answer all the more insistently when the deterrent deployment of nuclear weapons contributes more to a country's security than does conquest of territory. A country with a deterrent strategy does not need the extent of territory required by a country relying on a conventional defence in depth. A deterrent strategy makes it unnecessary for a country to fight for the sake of increasing its security, and this removes a major cause of war.[10]

Fourth, deterrent effect depends both on one's capabilities and on the will one has to use them. The will of the attacked, striving to preserve its own territory, can ordinarily be presumed stronger than the will of the attacker, striving to annex someone else's territory. Knowing this, the would-be attacker is further inhibited.[11]

Certainty about the relative strength of adversaries also improves the prospects for peace. From the late nineteenth century onwards the speed of technological innovation increased the difficulty of estimating relative strengths and predicting the course of campaigns. Since World War II, technology has advanced even faster, but short of an antiballistic missile (ABM) breakthrough, this does not matter very much. It does not disturb the American–Russian equilibrium because one side's missiles are not made obsolete by improvements in the other side's missiles. In 1906 the British *Dreadnought*, with the greater range and fire power of its guns, made older battleships obsolete. This does not happen to missiles. As Bernard Brodie put it: 'Weapons that do not have to fight their like do not become useless because of the advent of newer and superior types'.[12] They do have to survive their like, but that is a much simpler problem to solve (see discussion below).

Many wars might have been avoided had their outcomes been foreseen. 'To be sure,' Georg Simmel once said, 'the most effective presupposition for preventing struggle, the exact knowledge of the comparative strength of the two parties, is very often only to be obtained by the actual fighting out of the conflict'.[13] Miscalculation causes wars. One side expects victory at an affordable price, while the other side hopes to avoid defeat. Here the differences between conventional–multipolar and nuclear–bipolar worlds are fundamental. In the former, states are too often tempted to act on advantages that are wishfully discerned and narrowly calculated. In 1914, neither Germany nor France tried very hard to avoid a general war. Both hoped for victory even though they believed their forces to be quite evenly matched. In 1941, Japan, in attacking the United States, could hope for victory only if a series of events that were possible but not highly probable took place. Japan would grab resources sufficient for continuing the conquest of China and then dig in to defend a limited perimeter. Meanwhile, the United States and Britain would have to deal with Germany, which, having defeated the Soviet Union, would be supreme in Europe. Japan could then hope to fight a defensive war for a year or two until America, her purpose weakened, became willing to make a compromise peace in Asia.[14]

Countries more readily run the risks of war when defeat, if it comes, is distant and is expected to bring only limited damage. Given such expectations, leaders do not have to be insane to sound the trumpet and urge their people to be bold and courageous in the pursuit of victory. The outcome of battles and the course of campaigns are hard to foresee because so many things affect them, including the shifting allegiance and determination of alliance members. Predicting the result of conventional wars has proved difficult.

Uncertainty about outcomes does not work decisively against the fighting of wars in conventional worlds. Countries armed with conventional weapons go to war knowing that even in defeat their suffering will be limited. Calculations about nuclear war are differently made. Nuclear worlds call for and encourage a different kind of reasoning. If countries armed with nuclear weapons go to war, they do so knowing that their suffering may be unlimited. Of course, it also may not be. But that is not the kind of uncertainty that encourages anyone to use force. In a conventional world, one is uncertain about winning or losing. In a nuclear world, one is uncertain about surviving or being annihilated. If force is used and not kept within limits, catastrophe will result. That prediction is easy to make because it does not require close estimates of opposing forces. The number of one's cities that can be severely damaged is at least equal to the number of strategic warheads an adversary can deliver. Variations of number mean little within wide ranges. The expected effect of the deterrent achieves an easy clarity because wide margins of error in estimates of probable damage do not matter. Do we expect to lose one city or two, two cities or ten? When these are the pertinent questions, we stop thinking about running risks and start worrying about how to avoid them. In a conventional world, deterrent threats are ineffective because the damage threatened is distant, limited, and problematic. Nuclear weapons make military miscalculations difficult and politically pertinent prediction easy.

Dissuading a would-be attacker by throwing up a good-looking defence may be as effective as dissuading him through deterrence. Beginning with President Kennedy and Secretary of Defense McNamara in the early 1960s, we have asked how we can avoid, or at least postpone, using nuclear weapons rather than how we can mount the most effective defence. NATO's attempt to keep a defensive war conventional in its initial stage may guarantee that nuclear weapons, if used, will be used in a losing cause and in ways that multiply destruction without promising victory. Early use of very small warheads may stop escalation. Defensive deployment, if it should fail to dissuade, would bring small nuclear weapons into use before the physical, political and psychological environment had deteriorated. The chances of de-escalation are high if the use of nuclear weapons is carefully planned and their use is limited to the battlefield. We have rightly put strong emphasis on strategic deterrence, which makes large wars less likely, and wrongly slighted the question of whether nuclear weapons of low yield can effectively be used for defence, which would make any war at all less likely still.[15]

Lesser nuclear states, with choices tightly constrained by scarcity of resources, may be forced to make choices that NATO has avoided, to choose nuclear defence or nuclear deterrence rather than planning to fight a conventional war on a large scale and to use nuclear weapons only when conventional defences are breaking. Increased reliance on nuclear defence would decrease the credibility of nuclear deterrence. That would be acceptable if a nuclear defence were seen to be unassailable. An unassailable defence is fully dissuasive. Dissuasion is what is wanted whether by defence or by deterrence.

The likelihood of war decreases as deterrent and defensive capabilities increase. Whatever the number of nuclear states, a nuclear world is tolerable if those states are able to send convincing deterrent messages: It is useless to attempt to conquer because you will be severely punished. A nuclear world becomes even more tolerable if states are able to send convincing defensive messages: It is useless to attempt to conquer because you cannot. Nuclear weapons and an appropriate doctrine for their use may make it possible to approach the defensive–deterrent ideal, a condition that would cause the chances of war to dwindle. Concentrating attention on the destructive power of nuclear weapons has obscured the important benefits they promise to states trying to coexist in a self-help world.

Why Nations Want Nuclear Weapons

Nations want nuclear weapons for one or more of seven reasons. First, great powers always counter the weapons of other great powers, usually by imitating those who have introduced new weapons. It was not surprising that the Soviet Union developed atomic and hydrogen bombs, but rather that we thought the Baruch–Lilienthal plan might persuade her not to.

Second, a state may want nuclear weapons for fear that its great-power ally will not retaliate if the other great power attacks. Although Britain when she became a nuclear power thought of herself as being a great one, her reasons for deciding later to maintain a nuclear force arose from doubts that the United States could be counted on to retaliate in response to an attack by the Soviet Union on Europe and from Britain's consequent desire to place a finger on our nuclear trigger. As soon as the Soviet Union was capable of making nuclear strikes at American cities, West Europeans began to worry that America's nuclear umbrella no longer ensured that her allies would stay dry if it rained. Hugh Gaitskell, as Leader of the Oppostion, could say what Harold Macmillan, as Prime Minister, dared not: 'I do not believe that when we speak of our having to have nuclear weapons of our own it is because we must make a contribution to the deterrent of the West'. As he indicated, no contribution of consequence was made. Instead, he remarked, the desire for a nuclear force derives in large part 'from doubts about the readiness of the United States Government and the American citizens to risk the destruction of their cities on behalf of Europe'.[16] Similar doubts provided the strongest stimulus for France to become a nuclear power.

Third, a country without nuclear allies will want nuclear weapons all the more if some of its adversaries have them. So China and then India became nuclear powers, and Pakistan will probably follow.

Fourth, a country may want nuclear weapons because it lives in fear of its adversaries' present or future conventional strength. This is reason enough for Israel's nuclear weapons, which most authorities assume she either has at hand or can quickly assemble.

Fifth, some countries may find nuclear weapons a cheaper and safer alternative to running economically ruinous and militarily dangerous conventional arms races. Nuclear weapons may promise increased security and independence at an affordable price.

Sixth, countries may want nuclear weapons for offensive purposes. This, however, is an unlikely motivation for reasons given below.

Finally, by building nuclear weapons a country may hope to enhance its international standing. This is thought to be both a reason for and a consequence of developing nuclear weapons. One may enjoy the prestige that comes with nuclear weapons, and indeed a yearning for glory was not absent from de Gaulle's soul. But the nuclear military business is a serious one, and we may expect that deeper motives than desire for prestige lie behind the decision to enter it.

Mainly for reasons two through five, new members will occasionally enter the nuclear club. Nuclear weapons will spread from one country to another in the future for the same reasons they have spread in the past. What effects may we expect?

Relations among Nuclear Nations

In one important way nuclear weapons do change the relations of nations. Adversary states that acquire them are thereby made more cautious in their dealings with each other. For the most part, however, the relations of nations display continuity through their transition from non-nuclear to nuclear status.

Relations between the United States and the new nuclear states were much the same before and after they exploded atomic devices, as Michael Nacht points out.[17] Because America's relations with other nations are based on complex historical, economic, political, and military considerations, they are not likely to change much when lesser parties decide to build nuclear forces. This continuity of relations suggests a certain ambivalence. The spread of nuclear weapons, though dreaded, prompts only mild reactions when it happens. Our 'special relationship' with Britain led us to help her acquire and maintain nuclear forces. The distance tinged with distrust that marks our relations with France led us to oppose France's similar endeavours. China's nuclear forces neither prevented American–Chinese rapprochement earlier nor prompted it later. American–Indian relations worsened when America 'tilted' toward Pakistan during the India–Pakistan War of 1971. India's nuclear explosion in 1974 neither improved nor worsened relations with the United States in the long term. Unlike Canada, we did not deny India access to our nuclear supplies.[18] Again in 1980, President Carter approved shipment of nuclear fuel to India despite her refusal to accept safegueards on all of her nuclear facilities, as required by the Nuclear Non-Proliferation Act of 1978, a provision that the President can waive under certain circumstances. In asking Congress not to oppose his waiving the requirement, the President said this: 'We must do all we reasonably can to promote stability in the area and to bolster our relations with states there, particularly those that can play a role in checking Soviet expansionism'.[19] Nor did Pakistan's refusal to promise not to conduct nuclear tests prevent the United States from proposing to provide military aid after the Soviet Union's invasion of Afghanistan in December of 1979.

Stopping the spread of nuclear weapons has had a high priority for American governments, but clearly not the highest. In practice, other interests have proved to be more pressing. This is evident in our relations with every country that has developed nuclear weapons, or appeared to be on the verge of doing so, from Britain onwards. One may expect that relations of friendship and enmity, that inclinations to help and to hinder, will carry over from the pre- to the post-nuclear relations of nations.

What holds for the United States almost surely holds for the Soviet Union. The Soviet Union has strongly supported efforts to stop the spread of nuclear weapons. She has good reasons to do so. Many potential nuclear states are both nearby and hostile, from West Germany through Pakistan to South Korea. Others, like Iraq and India, are nearby and friendly. In international politics, however, friendliness and hostility are transient qualities. No doubt the Soviet Union would prefer conventional to nuclear neighbours whatever their present leanings may be. But also, after the discredit earned in occupying Afghanistan, the Soviet Union would like to repair relations with third-world countries. If we had refused to supply nuclear fuel to India, would the Soviet Union have done so? Secretary of State Edmund Muskie and others thought so.[20] For the Soviet Union, as for the United States, other interests may weigh more heavily than her interest in halting the spread of nuclear weapons.

One may wonder, however, whether the quality of relations changes within alliances as some of their members become nuclear powers. Alliances relate nations to one another in specific and well defined ways. By acquiring nuclear weapons a country is said to erode, and perhaps to wreck, the alliance to which it belongs. In part this statement mistakes effects for causes. Alliances are weakened by the doubts of some countries that another country will risk committing national suicide through retaliation against a nuclear power that attacks an ally. Such doubts caused Britain to remain a nuclear power and France to become one, but it did not destroy NATO. The Alliance holds together because even its nuclear members continue to depend on the United States. They gain strength from their nuclear weapons but remain weak in conventional arms and continue to be vulnerable economically. In an unbalanced world, when the weak feel threatened, they seek aid and protection from the strong. The nuclear forces of Britain and France have their effects on the Alliance without ending dependence on the United States.

Nuclear weapons were maintained by Britain and acquired by France at least in part as triggers for America's strategic deterrent. Given a sense of uncertainty combined with dependence, Europeans understandably strive to fashion their forces so as to ensure our commitment. They also wish to determine the form the commitment takes and the manner of its execution. After all, an American choice about how to respond to threats in Europe is a choice that affects the lives of Europeans and may bring their deaths. Europeans want a large voice in American policies that may determine their destiny. By mounting nuclear weapons, Britain and France hope to decide when we will retaliate against the Soviet Union for acts committed in Europe. Since retaliation risks our destruction, we resist surrendering the decision.

Alliances gain strength through a division of military labour. Within NATO, however, British and French duplication of American strategic nuclear weaponry on a minor scale adds little to the strength of NATO. The most striking division of labour is seen in the different ways European countries seek to influence American policy. Whether or not they are nuclear, lesser powers feeling threatened will turn to, or remain associated with, one or another of the great powers. So long as West European countries fail to increase and concert their efforts, they remain weak and feel threatened. Countries that are weak and threatened will continue to rely on the support of more powerful ones and to hope that the latter will bear a disproportionate share of the burden. West European states have become accustomed to depending on the United States. Relations of dependency are hardest to break where dependent states cannot shift from reliance on one great power to reliance on another. Under those circumstances, alliances endure even as nuclear weapons spread among their members.

From NATO's experience we may conclude that alliances are not wrecked by the spread of nuclear weapons among their members. NATO accommodates both nuclear and conventional states in ways that continue to evolve. Past evidence does not support the fear that alliances, which have contributed an element of order to an anarchic world, are threatened by the spread of nuclear weapons. The Soviet Union won't permit the East European countries to become nuclear powers and the United States has accommodated two of her allies doing so, though uneasily in the case of France. The spread of nuclear weapons among members of an alliance changes relations among them without breaking alliances apart.

II. THE FURTHER SPREAD OF NUCLEAR WEAPONS

Contemplating the nuclear past gives grounds for hoping that the world will survive if further nuclear powers join today's six or seven. This tentative conclusion is called into question by the widespread belief that the infirmities of some nuclear states and the delicacy of their nuclear forces will work against the preservation of peace and for the fighting of nuclear wars. The likelihood of avoiding destruction as more states become members of the nuclear club is often coupled with the question of *who* those states will be. What are the likely differences in situation and behaviour of new as compared to old nuclear powers?

Nuclear Weapons and Domestic Stability

What are the principal worries? Because of the importance of controlling nuclear weapons – of keeping them firmly in the hands of reliable officials – rulers of nuclear states may become more authoritarian and ever more given to secrecy. Moreover, some potential nuclear states are not politically strong and stable enough to ensure control of the weapons and of the decision to use them. If neighbouring, hostile, unstable states are armed with nuclear weapons, each will fear attack by the other. Feelings of insecurity may lead to arms races that subordinate civil needs to military necessities. Fears are compounded by the danger of internal coups in which the control of nuclear weapons may be the main object of the struggle and the key to political power. Under these fearful circumstances, to maintain governmental authority and civil order may be impossible. The legitimacy of the state and the loyalty of its citizenry may dissolve because the state is no longer thought to be capable of maintaining external security and internal order. The first fear is that states become tyrannical; the second, that they lose control. Both these fears may be realized, either in different states or, indeed, in the same state at different times.[21]

What can one say? Four things primarily. First, possession of nuclear weapons may slow arms races down, rather than speed them up, a possibility considered later. Second, for less developed countries to build nuclear arsenals requires a long lead time. Nuclear power and nuclear weapons programmes, like population policies, require administrative and technical teams able to formulate and sustain programmes of considerable cost that pay off only in the long run. The more unstable a government, the shorter becomes the attention span of its leaders. They have to deal with today's problems and hope for the best tomorrow.[22] In countries where political control is most difficult to maintain, governments are least likely to initiate nuclear-weapons programmes. In such states, soldiers help to maintain leaders in power or try to overthrow them. For those purposes nuclear weapons are not useful. Soldiers who have political clout, or want it, are less interested in nuclear weapons than they are in more immediately useful instruments of political control. They are not scientists and technicians. They like to command troops and squadrons. Their vested interests are in the military's traditional trappings.

Third, although highly unstable states are unlikely to initiate nuclear projects, such projects, begun in stable times, may continue through periods of political turmoil and succeed in producing nuclear weapons. A nuclear state may be unstable or may become so. But what is hard to comprehend is why, in an internal struggle for power, any of the contenders should start using nuclear weapons. Who would they aim at? How would they use them as instruments for maintaining or gaining control? I see little more reason to fear that one faction or another in some less developed country will fire atomic weapons in a struggle for political power than that they will be used in a crisis of succession in the Soviet Union or China. One or another nuclear state will experience uncertainty of succession, fierce struggles for power, and instability of regime. Those who fear the worst have not shown with any plausibility how those expected events may lead to the use of nuclear weapons.

Fourth, the possibility of one side in a civil war firing a nuclear warhead at its opponent's stronghold nevertheless remains. Such an act would produce a national tragedy, not an international one. This question then arises: Once the weapon is fired, what happens next? The domestic use of nuclear weapons is, of all the uses imaginable, least likely to lead to escalation and to threaten the stability of the central balance. The United States and the Soviet Union, and other countries as well, would have the strongest reasons to issue warnings and to assert control.

Nuclear weapons and regional stability

Nuclear weapons are not likely to be used at home. Are they likely to be used abroad? As nuclear weapons spread, what new causes may bring effects different from and worse than those known earlier in the nuclear age? This section considers five ways in which the new world is expected to differ from the old and then examines the prospects for, and the consequences of, new nuclear states using their weapons for blackmail or for fighting an offensive war.

In what ways may the actions and interactions of new nuclear states differ from those of old nuclear powers? First, new nuclear states may come in hostile pairs and share a common border. Where states are bitter enemies one may fear that they will be unable to resist using their nuclear weapons against each other. This is a worry about the future that the past does not disclose. The Soviet Union and the United States, and the Soviet Union and China, are hostile enough; and the latter pair share a long border. Nuclear weapons have caused China and the Soviet Union to deal cautiously with each other. But bitterness among some potential nuclear states, so it is said, exceeds that experienced by the old ones. Playing down the bitterness sometimes felt by the United States, the Soviet Union, and China requires a creative reading of history. Moreover, those who believe that bitterness causes wars assume a close association that is seldom found between bitterness among nations and their willingness to run high risks.

Second, some new nuclear states may have governments and societies that are not well rooted. If a country is a loose collection of hostile tribes, if its leaders form a thin veneer atop a people partly nomadic and with an authoritarian history, its rulers may be freer of constraints than, and have different values from, those who rule older and more fully developed polities. Idi Amin and Muammar el-Qaddafi fit into these categories, and they are favourite examples of the kinds of rulers who supposedly cannot be trusted to manage nuclear weapons responsibly. Despite wild rhetoric aimed at foreigners, however, both of these 'irrational' rulers became cautious and modest when punitive actions against them might have threatened their ability to rule. Even though Amin lustily slaughtered members of tribes he disliked, he quickly stopped goading Britain once the sending of her troops appeared to be a possibility. Qaddafi has shown similar restraint. He and Anwar Sadat have been openly hostile since 1973. In July of 1977 both sides launched commando attacks and air raids, including two large air strikes by Egypt on Libya's el Adem airbase. Neither side let the attacks get out of hand. Qaddafi showed himself to be forbearing and amenable to mediation by other Arab leaders. Shai Feldman uses these and other examples to argue that Arab leaders are deterred from taking inordinate risks not because they engage in intricate rational calculations but simply because they, like other rulers, are 'sensitive to costs'.[23]

Many Westerners who write fearfully about a future in which third-world countries have nuclear weapons seem to view their people in the once familiar imperial manner as 'lesser breeds without the law'. As is usual with ethnocentric views, speculation takes the place of evidence. How do we know, someone has asked, that a nuclear-armed and newly hostile Egypt or a nuclear-armed and still hostile Syria would not strike to destroy Israel at the risk of Israeli bombs falling on some of their cities? More than a quarter of Egypt's people live in four cities: Cairo, Alexandria, Giza, and Aswan. More than a quarter of Syria's live in three: Damascus, Aleppo, and Homs.[24] What government would risk sudden losses of such proportion or indeed of much lesser proportion? Rulers want to have a country that they can continue to rule. Some Arab country might wish that some other Arab country would risk its own destruction for the sake of destroying Israel, but there is no reason to think that any Arab country would do so. One may be impressed that, despite ample bitterness, Israelis and Arabs have limited their wars and accepted constraints placed on them by others. Arabs did not marshal their resources and make an all-out effort to destroy Israel in the years before Israel could strike back with nuclear warheads. We cannot expect countries to risk more in the presence of nuclear weapons than they have in their absence.

Third, many fear that states that are radical at home will recklessly use their nuclear weapons in pursuit of revolutionary ends abroad. States that are radical at home, however, may not be radical abroad. Few states have been radical in the conduct of their foreign policy, and fewer have remained so for long. Think of the Soviet Union and the People's Republic of China. States coexist in a competitive arena. The pressures of competition cause them to behave in ways that make the threats they face manageable, in ways that enable them to get along. States can remain radical in foreign policy only if they are overwhelmingly strong – as none of the new nuclear states will be – or if their radical acts fall short of damaging vital interests of nuclear powers. States that acquire nuclear weapons will not be regarded with indifference. States that want to be freewheelers have to stay out of the nuclear business. A nuclear Libya, for example, would have to show caution, even in rhetoric, lest she suffer retaliation in response to someone else's anonymous attack on a third state. That state, ignorant of who attacked, might claim that its intelligence agents had identified Libya as the culprit and take the opportunity to silence her by striking a conventional or nuclear blow. Nuclear weapons induce caution, especially in weak states.

Fourth, while some worry about nuclear states coming in hostile pairs, others worry that the bipolar pattern will not be reproduced regionally in a world populated by larger numbers of nuclear states. The simplicity of relations that obtains when one party has to concentrate its worry on only one other, and the ease of calculating forces and estimating the dangers they pose, may be lost. The structure of international politics, however, will remain bipolar so long as no third state is able to compete militarily with the great powers. Whatever the structure, the relations of states run in various directions. This applied to relations of deterrence as soon as Britain gained nuclear capabilities. It has not weakened deterrence at the centre and need not do so regionally. The Soviet Union now has to worry lest a move made in Europe cause France and Britain to retaliate, thus possibly setting off American forces. She also has to worry about China's forces. Such worries at once complicate calculations and strengthen deterrence.

Fifth, in some of the new nuclear states civil control of the military may be shaky. Nuclear weapons may fall into the hands of military officers more inclined than civilians to put them to offensive use. This again is an old worry. I can see no reason to think that civil control of the military is secure in the Soviet Union, given the occasional presence of serving officers in the Politburo and some known and some surmised instances of military intervention in civil affairs at critical times.[25] And in the People's Republic of China military and civil branches of government have been not separated but fused. Although one may prefer civil control, preventing a highly destructive war does not require it. What is required is that decisions be made that keep destruction within bounds, whether decisions are made by civilians or soldiers. Soldiers may be more cautious than civilians.[26] Generals and admirals do not like uncertainty, and they do not lack patriotism. They do not like to fight conventional wars under unfamiliar conditions. The offensive use of nuclear weapons multiplies uncertainties. Nobody knows what a nuclear battlefield would look like, and nobody knows what happens after the first city is hit. *Uncertainty* about the course that a nuclear war might follow, along with the *certainty* that destruction can be immense, strongly inhibits the first use of nuclear weapons.

Examining the supposedly unfortunate characteristics of new nuclear states removes some of one's worries. One wonders why their civil and military leaders should be less interested in avoiding self-destruction than leaders of other states have been. Nuclear weapons have never been used in a world in which two or more states possessed them. Still, one's feeling that something awful will happen as new nuclear powers are added to the present group is not easily quieted. The fear remains that one state or another will fire its weapons in a coolly calculated pre-emptive strike, or fire them in a moment of panic, or use them to launch a preventive war. These possibilities are examined in the next section. Nuclear weapons may also back a policy of blackmail, or be set off anonymously, or be used in a combined conventional-nuclear attack.

Consider blackmail first. Two conditions make for the success of nuclear blackmail. First, when only one country had nuclear weapons, threats to use them had more effect. Thus, President Truman's nuclear threats may have levered the Soviet Union's troops out of Azerbaijan in 1946. Second, if a country has invested troops and suffered losses in a conventional war, its nuclear blackmail may work. In 1953, Eisenhower and Dulles may have convinced Russia and China that they would widen the Korean War and intensify it by using nuclear weapons if a settlement were not reached. In Korea, we had gone so far that the threat to go further was plausible. The blackmailer's nuclear threat is not a cheap way of working one's will. The threat is simply incredible unless a considerable investment has already been made. Dulles's speech of 12 January 1954 seemed to threaten massive retaliation in response to mildly bothersome actions by others. The successful seige of Dien Bien Phu in the spring of that year showed the limitations of such threats. Capabilities foster olicies that employ them. But monstrous capabilities foster monstrous policies, which when contemplated are seen to be too horrible to carry through. Imagine an Arab state threatening to strike Tel Aviv if the West Bank is not evacuated by Israelis. No state can make the threat with credibility because no state can expect to execute the threat without danger to themselves.

Some have feared that nuclear weapons may be fired anonymously – by radical Arab states, for example, to attack an Israeli city so as to block a peace settlement.[27] But the state exploding the warhead could not be sure of remaining unidentified. Even if a country's leaders persuade themselves that chances of retaliation are low, who would run the risk? Once two or more countries have nuclear weapons, the response to nuclear threats, even against non-nuclear states, becomes unpredictable.

Although nuclear weapons are poor instruments for blackmail, would they not provide a cheap and decisive offensive force when used against a conventionally armed enemy? Some people think that South Korea wants, and that earlier the Shah's Iran had wanted, nuclear weapons for offensive use. Yet one cannot say why South Korea would use nuclear weapons against fellow Koreans while trying to reunite them nor how she could use nuclear weapons against the North, knowing that China and Russia might retaliate. And what goals could a conventionally strong Iran have entertained that would have tempted her to risk using nuclear weapons? A country that takes the nuclear offensive has to fear an appropriately punishing strike by someone. Far from lowering the expected cost of aggression, a nuclear offence even against a non-nuclear state raises the possible costs of aggression to incalculable heights because the aggressor cannot be sure of the reaction of other nuclear powers.

Nuclear weapons do not make nuclear war a likely prospect, as history has so far shown. The point made when discussing the domestic use of nuclear weapons, however, bears repeating. No one can say that nuclear weapons will never be used. Their use, although unlikely, is always possible. In asking what the spread of nuclear weapons will do to the world, we are asking about the effects to be expected as a larger number of relatively weak states get nuclear weapons. If such states use nuclear weapons, the world will not end. And the use of nuclear weapons by lesser powers would hardly trigger them elsewhere, with the US and the USSR becoming involved in ways that might shake the central balance.

Deterrence with Small Nuclear Forces

A number of problems are thought to attend the efforts of minor powers to use nuclear weapons for deterrence. In this section, I ask how hard these problems are for new nuclear states to solve.

The Forces Required for Deterrence

In considering the physical requirements of deterrent forces, we should recall the difference between prevention and pre-emption. A preventive war is launched by a stronger state against a weaker one that is thought to be gaining strength. A pre-emptive strike is launched by one state to blunt an attack that another state is presumably preparing to launch.

The first danger posed by the spread of nuclear weapons would seem to be that each new nuclear state may tempt an old one to strike preventively in order to destroy an embryonic nuclear capability before it can become militarily effective. Because of America's nuclear arsenal, the Soviet Union could hardly have destroyed the budding forces of Britain and France; but the United States could have struck the Soviet Union's early nuclear facilities, and the United States and the Soviet Union could have struck China's. Such preventive strikes have been treated as more than abstract possibilities. When Francis P. Matthews was President Truman's Secretary of the Navy, he made a speech that seemed to favour our waging a preventive war. The United States, he urged, should be willing to pay 'even the price of instituting a war to compel cooperation for peace'.[28]

The United States and the Soviet Union considered making preventive strikes against China early in her nuclear career. Preventive strikes against nuclear installations can also be made by non-nuclear states and have sometimes been threatened. Thus President Nasser warned Israel in 1960 that Egypt would attack if she were sure that Israel was building a bomb. 'It is inevitable', he said, 'that we should attack the base of aggression, even if we have to mobilize four million to destroy it'.[29]

The uneven development of the forces of potential and of new nuclear states creates occasions that seem to permit preventive strikes and may seem to invite them. Two stages of nuclear development should be distinguished. First, a country may be in an early stage of nuclear development and be obviously unable to make nuclear weapons. Second, a country may be in an advanced stage of nuclear development, and whether or not it has some nuclear weapons may not be surely known. All of the present nuclear countries went through both stages, yet until Israel struck Iraq's nuclear facility in June of 1981 no one had launched a preventive strike. A number of reasons combined may account for the reluctance of states to strike in order to prevent adversaries from developing nuclear forces. A preventive strike would seem to be most promising during the first stage of nuclear development. A state could strike without fearing that the country it attacked would return a nuclear blow. But would one strike so hard as to destroy the very potential for future nuclear development? If not, the country struck could simply resume its nuclear career. If the blow struck is less than devastating, one must be prepared to repeat it or to occupy and control the country. To do either would be difficult and costly.

In striking Iraq, Israel showed that a preventive strike can be made, something that was not in doubt. Israel's act and its consequences , however, make clear that the likelihood of useful accomplishment is low. Israel's strike increased the determination of Arabs to produce nuclear weapons. Arab states that may attempt to do so will now be all the more secretive and circumspect. Israel's strike, far from foreclosing Iraq's nuclear future, gained her the support of some other Arab states in pursuing it. And despite Prime Minister Begin's vow to strike as often as need be, the risks in doing so would rise with each occasion.

A preventive strike during the second stage of nuclear development is even less promising than a preventive strike during the first stage. As more countries acquire nuclear weapons, and as more countries gain nuclear competence through power projects, the difficulties and dangers of making preventive strikes increase. To know for sure that the country attacked has not already produced or otherwise acquired some deliverable warheads becomes increasingly difficult. If the country attacked has even a rudimentary nuclear capability, one's own severe punishment becomes possible. Fission bombs may work even though they have not been tested, as was the case with the bomb dropped on Hiroshima. Israel has apparently not tested weapons, yet Egypt cannot know whether Israel has zero, ten, or twenty warheads. And if the number is zero and Egypt can be sure of that, she would still not know how many days are required for assembling components that may be on hand.

Preventive strikes against states that have, or may have, nuclear weapons are hard to imagine, but what about pre-emptive ones? The new worry in a world in which nuclear weapons have spread is that states of limited and roughly similar capabilities will use them against one another. They do not want to risk nuclear devastation anymore than we do. Pre-emptive strikes nevertheless seem likely because we assume that their forces will be 'delicate'. With delicate forces, states are tempted to launch disarming strikes before their own forces can be struck and destroyed.

To be effective a deterrent force must meet three requirements. First, a part of the force must appear to be able to survive an attack and launch one of its own. Second, survival of the force must not require early firing in response to what may be false alarms. Third, weapons must not be susceptible to accidental and unauthorized use. Nobody wants vulnerable, hair-trigger, accident-prone forces. Will new nuclear states find ways to hide their weapons, to deliver them, and to control them? Will they be able to deploy and manage nuclear weapons in ways that meet the physical requirements of deterrent forces?

The United States even today worries about the vulnerability of its vast and varied arsenal. Will not new nuclear states, slightly and crudely armed, be all the more worried about the survival of their forces? In recent years, we have exaggerated the difficulty of deterrence by shifting attention from situations to weaponry and from weapons systems to their components. Some Americans are concerned about the vulnerability of our strategic system because its land-based component can be struck and perhaps largely destroyed by the Soviet Union in the middle 1980s. If the Soviet Union tried that, we would still have thousands of warheads at sea and thousands of bombs in the air. The Soviet Union could not be sure that we would fail to launch on warning or fail to retaliate later. Uncertainty deters, and there would be plenty of uncertainty about our response in the minds of the Soviet Union's leaders.

In McNamara's day and earlier the term 'counterforce' had a clear and precise meaning. Country *A* was said to have a counterforce capability if by striking first it could reduce country *B*'s missiles and bombers to such small numbers that country *A* would be reluctantly willing to accept the full force of *B*'s retaliation. In this respect, as in others, strategic discourse now lacks the clarity and precision it once had. Whether in a conventional or a nuclear world, one cannot usefully compare some components of a nation's military forces without taking account of what other components can do. Both the United States and the Soviet Union have strategic nuclear weapons that can destroy some of the other side's strategic nuclear weapons. Neither the United States nor the Soviet Union can reduce the other side's strategic forces to the point where it no longer retains an immense capability for striking at cities and a considerable capability for striking at military targets as well. That we have ten thousand warheads to the Soviet Union's six thousand makes us no worse and no better off than we were when the ratio was even more favourable. That the throw-weight of the Soviet Union's missiles exceeds ours by several times makes us no better and no worse off than it would be were the ratio to be reversed.[30]

Deterrent forces are seldom delicate because no state wants delicate forces and nuclear forces can easily be made sturdy. Nuclear weapons are fairly small and light. They are easy to hide and to move. Early in the nuclear age, people worried about atomic bombs being concealed in packing boxes and placed in the holds of ships to be exploded when a signal was given. Now more than ever people worry about terrorists stealing nuclear warheads because various states have so many of them. Everybody seems to believe that terrorists are capable of hiding bombs.[31] Why should states be unable to do what terrorist gangs are thought to be capable of?

It is sometimes claimed that the few bombs of a new nuclear state create a greater danger of nuclear war than additional thousands for the United States and the Soviet Union. Such statements assume that pre-emption of a small force is easy. It is so only if the would-be attacker knows that the intended victim's warheads are few in number, knows their exact number and locations, and knows that they will not be moved or fired before they are struck. To know all of these things, and to know that you know them for sure, is exceedingly difficult. How can military advisers promise the full success of a disarming first strike when the penalty for slight error may be so heavy? In 1962, Tactical Air Command promised that an American strike against Soviet missiles in Cuba would certainly destroy 90% of them but would not guarantee 100%.[32] In the best case a first strike destroys all of a country's deliverable weapons. In the worst case, some survive and can still be delivered.

If the survival of nuclear weapons requires their dispersal and concealment, do not problems of command and control become harder to solve? Americans think so because we think in terms of large nuclear arsenals. Small nuclear powers will neither have them nor need them. Lesser nuclear states might deploy, say, ten real weapons and ten dummies, while permitting other countries to infer that the numbers are larger. The adversary need only believe that some warheads may survive his attack and be visited on him. That belief should not be hard to create without making command and control unreliable. All nuclear countries must live through a time when their forces are crudely designed. All countries have so far been able to control them. Relations between the United States and the Soviet Union, and later among the United States, the Soviet Union, and China, were at their bitterest just when their nuclear forces were in early stages of development, were unbalanced, were crude and presumably hard to control. Why should we expect new nuclear states to experience greater difficulties than the old ones were able to cope with? Moreover, although some of the new nuclear states may be economically and technically backward, they will either have an expert and highly trained group of scientists and engineers or they will not produce nuclear weapons. Even if they buy the weapons, they will have to hire technicians to maintain and control them. We do not have to wonder whether they will take good care of their weapons. They have every incentive to do so. They will not want to risk retaliation because one or more of their warheads accidentally strikes another country.

Hiding nuclear weapons and keeping them under control are tasks for which the ingenuity of numerous states is adequate. Nor are means of delivery difficult to devise or procure. Bombs can be driven in by trucks from neighbouring countries. Ports can be torpedoed by small boats lying off shore. Moreover, a thriving arms trade in ever more sophisticated military equipment provides ready access to what may be wanted, including planes and missiles suited nuclear warhead delivery

Lesser nuclear states can pursue deterrent strategies effectively. Deterrence requires the ability to inflict unacceptable damage on another country. 'Unacceptable damage' to the Soviet Union was variously defined by Robert McNamara as requiring the ability to destroy a fifth to a fourth of her population and a half to two-thirds of her industrial capacity. American estimates of what is required for deterrence have been absurdly high. To deter, a country need not appear to be able to destroy a fourth or a half of another country, although in some cases that might be easily done. Would Libya try to destroy Israel's nuclear weapons at the risk of two bombs surviving to fall on Tripoli and Bengazi? And what would be left of Israel if Tel Aviv and Haifa were destroyed?

The weak can deter one another. But can the weak deter the strong? Raising the question of China's ability to deter the Soviet Union highlights the issue. The population and industry of most states concentrate in a relatively small number of centres. This is true of the Soviet Union. A major attack on the top ten cities of the Soviet Union would get 25% of its industrial capacity and 25% of its urban population. Geoffrey Kemp in 1974 concluded that China would probably be able to strike on that scale.[33] And, I emphasize again, China need only appear to be able to do it. A low probability of carrying a highly destructive attack home is sufficient for deterrence. A force of an imprecisely specifiable minimum capability is nevertheless needed.

In a 1979 study, Justin Galen (pseud.) wonders whether the Chinese have a force physically capable of deterring the Soviet Union. He estimates that China has 60 to 80 medium-range and 60 to 80 intermediate-range missiles of doubtful reliability and accuracy and 80 obsolete bombers. He rightly points out that the missiles may miss their targets even if fired at cities and that the bombers may not get through the Soviet Union's defences. Moreover, the Russians may be able to pre-empt, having almost certainly 'located virtually every Chinese missile, aircraft, weapons storage area and production facility'.[34] But surely Russian leaders reason the other way around. To locate virtually all missiles and aircraft is not good enough. Despite inaccuracies, a few Chinese missiles *may* hit Russian cities, and some bombers *may* get through. Not much is required to deter. What political-military objective is worth risking Vladivostock, Novosibirsk, and Tomsk, with no way of being sure that Moscow will not go as well?

Prevention and pre-emption are difficult games because the costs are so high if the games are not perfectly played. Inhibitions against using nuclear forces for such attacks are strong, although one cannot say they are absolute. Some of the inhibitions are simply human. Can country *A* find justification for a preventive or pre-emptive strike against *B* if *B*, in acquiring nuclear weapons, is imitating *A*? The leader of a country that launches a preventive or pre-emptive strike courts condemnation by his own people, by the world's people, and by history. Awesome acts are hard to perform. Some of the inhibitions are political. As Bernard Brodie tirelessly and wisely said, war has to find a political objective that is commensurate with its cost. Clausewitz's central tenet remains valid in the nuclear age.[35] Ultimately, the inhibitions lie in the impossibility of knowing for sure that a disarming strike will totally destroy an opposing force and in the immense destruction even a few warheads can wreak.

The Credibility of Small Deterrent Forces

The credibility of weaker countries' deterrent threats has two faces. The first is physical. Will such countries be able to construct and protect a deliverable force? We have found that they can readily do so. The second is psychological. Will an adversary believe that retaliation threatened will be carried out?

Deterrent threats backed by second-strike nuclear forces raise the expected costs of war to such heights that war becomes unlikely. But deterrent threats may not be credible. In a world where two or more countries can make them, the prospect of *mutual* devastation makes it difficult, or irrational, to execute threats should the occasion for doing so arise. Would it not be senseless to risk suffering further destruction once a deterrent force had failed to deter? Believing that it would be, an adversary may attack counting on the attacked country's unwillingness to risk initiating a devasting exchange by its own retaliation. Why retaliate once a threat to do so has failed? If one's policy is to rely on forces designed to deter, then an attack that is nevertheless made shows that one's reliance was misplaced. The course of wisdom may be to pose a new question: What is the best policy once deterrence has failed? One gains nothing by destroying an enemy's cities. Instead, in retaliating, one may prompt the enemy to unleash more warheads. A ruthless aggressor may strike believing that the leaders of the attacked country are capable of following such a 'rational' line of thought. To carry out the threat that was 'rationally' made may be 'irrational'. This old worry achieved new prominence as the strategic capabilities of the Soviet Union approached those of the United States in the middle 1970s. The Soviet Union, some feared, might believe that the United States would be self-deterred.[36]

Much of the literature on deterrence emphasizes the problem of achieving the credibility on which deterrence depends and the danger of relying on a deterrent of uncertain credibility. One earlier solution to the problem was found in Thomas Schelling's notion of 'the threat that leaves something to chance'. No state can know for sure that another state will refrain from retaliating even when retaliation would be irrational. No state can bet heavily on another state's rationality. Bernard Brodie put the thought more directly, while avoiding the slippery notion of rationality. Rather than ask what it may be rational or irrational for governments to do, the question he asked, and repeated in various ways over the years, was this: How do governments behave in the presence of awesome dangers? His answer was 'very carefully'.

To ask why a country should carry out its deterrent threat once deterrence has failed is to ask the wrong question. The question suggests that an aggressor may attack believing that the attacked country may not retaliate. This invokes the conventional logic that analysts find so hard to forsake. In a conventional world, a country can sensibly attack if it believes that success is probable. In a nuclear world, a country cannot sensibly attack unless it believes that success is assured. An attacker is deterred even if he believes only that the attacked *may* retaliate. Uncertainty of response, not certainty, is required for deterrence because, if retaliation occurs, one risks losing all. In a nuclear world, we should look less at the retaliator's conceivable inhibitions and more at the challenger's obvious risks.

One may nevertheless wonder, as Americans recently have, whether retaliatory threats remain credible if the strategic forces of the attacker are superior to those of the attacked. Will an unsuccessful defender in a conventional war have the courage to unleash its deterrent force, using nuclear weapons first against a country having superior strategic forces? Once more this asks the wrong question. The previous paragraph urged the importance of shifting attention from the defender's possible inhibitions to the aggressor's unwillingness to run extreme risks. This paragraph urges the importance of shifting attention from the defender's courage to the different valuations that defenders and attackers place on the stakes. An attacked country will ordinarily value keeping its own territory more highly than an attacker will value gaining some portion of it. Given second-strike capabilities, it is not the balance of forces but the courage to use them that counts. The balance or imbalance of strategic forces affects neither the calculation of danger nor the question of whose will is the stronger. Second-strike forces have to be seen in absolute terms. The question of whose interests are paramount will then determine whose will is perceived as being the stronger.

Emphasizing the importance of the 'balance of resolve', to use Glenn Snyder's apt phrase, raises questions about what a deterrent force covers and what it does not.[37] In answering these questions, we can learn something from the experience of the last three decades. The United States and the Soviet Union have limited and modulated their provocative acts, the more carefully so when major values for one side or the other were at issue. This can be seen both in what they have and in what they have not done. Whatever support the Soviet Union gave to North Korea's initial attack on the South was given after Secretary of State Acheson, the Joint Chiefs of Staff, General MacArthur, and the Chairman of the Senate Foreign Relations Committee all explicitly excluded both South Korea and Taiwan from America's defence perimeter. The United States, to take another example, could fight for years on a large scale in South-east Asia because neither success nor failure mattered much internationally. Victory would not have made the world one of American hegemony. Defeat would not have made the world one of Russian hegemony. No vital interest of either great power was at stake, as both Kissinger and Brezhnev made clear at the time.[38] One can fight without fearing escalation only where little is at stake. And that is where the deterrent does not deter.

Actions at the periphery can safely be bolder than actions at the centre. In contrast, where much is at stake for one side, the other side moves with care. Trying to win where winning would bring the central balance into question threatens escalation and becomes too risky to contemplate. The United States is circumspect when East European crises impend. Thus Secretary of State Dulles assured the Soviet Union when Hungarians rebelled in October of 1956 that we would not interfere with efforts to suppress them. And the Soviet Union's moves in the centre of Europe are carefully controlled. Thus her probes in Berlin have been tentative, reversible, and ineffective. Strikingly, the long border between East and West Europe – drawn where borders earlier proved unstable – has been free even of skirmishes in all of the years since the Second World War.

Both of the nuclear great powers become watchful and wary when events occur that may get out of control The strikes by Polish workers that began in August of 1980 provide the most recent illustration of this. The Soviet Union, her diplomats privately said, was 'determined to find a peaceful solution'. And a senior Carter Administration specialist on the Soviet Union was quoted as follows: 'It is a very explosive situation. Everyone is aware of it, and they are all reluctant to strike a match'.[39] Even though many steps would intervene between workers' strikes and the beginning of any fighting at all in the centre of Europe, both the Soviet Union and the United States showed great caution from the outset. By political and military logic, we can understand why nuclear weapons induce great caution, and we can confirm that they do by observing the differences of behaviour between great powers in nuclear and great powers in conventional worlds.

Contemplating American and Russian post-war behaviour, and interpreting it in terms of nuclear logic, suggests that deterrence extends to vital interests beyond the homeland more easily than many have thought. The United States cares more about Western Europe than the Soviet Union does. The Soviet Union cares more about Eastern Europe than the United States does. Communicating the weight of one side's concern as compared to the other side's has been easily enough done when the matters at hand affect the United States and the Soviet Union directly. For this reason, Western Europe's anxiety over the coverage it gets from American strategic forces, while understandable, is exaggerated. The United States might well retaliate should the Soviet Union make a major military move against a NATO country, and that is enough to deter.

The Problem of Extended Deterrence

How far from the homeland does deterrence extend? One answers that question by defining the conditions that must obtain if deterrent threats are to be credited. First, the would-be attacker must be made to see that the deterrer considers the interests at stake to be vital ones. One cannot assume that countries will instantly agree on the question of whose interests are vital. Nuclear weapons, however, strongly incline them to grope for *de facto* agreement on the answer rather than to fight over it.

Second, political stability must prevail in the area that the deterrent is intended to cover. If the threat to a regime is in good part from internal factions, then an outside power may risk supporting one of them even in the face of deterrent threats. The credibility of a deterrent force requires both that interests be seen to be vital and that it is the attack from outside that threatens them. Given these conditions, the would-be attacker provides both the reason to retaliate and the target for retaliation. Deterrence gains in credibility the more highly valued the interests covered appear to be.

The problem of stretching a deterrent, which has so agitated the western alliance, is not a problem for lesser nuclear states. Their problem is to protect not others but themselves. Many have feared that lesser nuclear states would be the first to break the nuclear taboo and that they would use their weapons irresponsibly. I expect just the opposite. Weak states find it easier than strong states to establish their credibility. Not only will they not be trying to stretch their deterrent forces to cover others but also their vulnerability to conventional attack lends credence to their nuclear threats. Because in a conventional war they can lose so much so fast, it is easy to believe that they will unleash a deterrent force even at the risk of receiving a nuclear blow in return. With deterrent forces, the party that is absolutely threatened prevails.[40] Use of nuclear weapons by lesser states will come only if survival is at stake. And this should be called not irresponsible but responsible use.

An opponent who attacks what is unambiguously mine risks suffering great distress if I have second-strike forces. This statement has important implications for both the deterrer and the deterred. Where territorial claims are shadowy and disputed, deterrent writs do not run. As Steven J. Rosen has said:'It is difficult to imagine Israel committing national suicide to hold on to Abu Rudeis or Hebron or Mount Hermon'.[41] Attacks on Israel's occupied lands would be imaginable even if she admitted having nuclear weapons. Establishing the credibility of a deterrent force requires moderation of territorial claims on the part of the would-be deterrer. For modest states, weapons whose very existence works strongly against their use are just what is wanted.

In a nuclear world, conservative would-be attackers will be prudent, but will all would-be attackers be conservative? A new Hitler is not unimaginable. Would the presence of nuclear weapons have moderated Hitler's behaviour? Hitler did not start World War II in order to destroy the Third Reich. Indeed, he was surprised and dismayed by the British and French declaration of war on Poland's behalf. After all, the western democracies had not come to the aid of a geographically defensible and militarily strong Czechoslovakia. Why then should they have declared war on behalf of a less defensible Poland and against a Germany made stronger by the incorporation of Czechoslovakia's armour? From the occupation of the Rhineland in 1936 to the invasion of Poland in 1939, Hitler's calculations were realistically made. In those years, Hitler would almost surely have been deterred from acting in ways that immediately threatened massive death and widespread destruction in Germany. And, if Hitler had not been deterred, would his generals have obeyed his commands? In a nuclear world, to act in blatantly offensive ways is madness. Under the circumstances, how many generals would obey the commands of a madman? One man alone does not make war.

To believe that nuclear deterrence would have worked against Germany in 1939 is easy. It is also easy to believe that in 1945, given the ability to do so, Hitler and some few around him would have fired nuclear warheads at the United States, Great Britain, and the Soviet Union as their armies advanced, whatever the consequences for Germany. Two considerations, however, work against this possibility. When defeat is seen to be inevitable, a ruler's authority may vanish. Early in 1945 Hitler apparently ordered the initiation of gas warfare, but no one responded.[42] The first consideration applies in a conventional world; the second in a nuclear world. In the latter, no country will press another to the point of decisive defeat. In the desperation of defeat desperate measures may be taken, but the last thing anyone wants to do is to make a nuclear nation feel desperate. The unconditional surrender of a nuclear nation cannot be demanded.

Dreaming up situations in which someone may have 'good reason' to strike first has plagued strategic thought ever since Herman Kahn began writing scenarios. Considering one such scenario is worthwhile because it has achieved some popularity among those who believe that deterrence is difficult.[43] Albert Wohlstetter imagines a situation in which the Soviet Union might strike first. Her leaders might decide to do so in a desperate effort to save a sinking regime. The desperation could be produced, Wohlstetter thinks, by 'disastrous defeat in peripheral war', by 'loss of key satellites', by the 'danger of revolt spreading – possibly to Russia itself', or by 'fear of an attack by ourselves'. Under such circumstances, the risk of *not* striking might 'appear very great to the Soviets'.[44] Imagination places the Soviet Union in a situation where striking first is bad, but presumably not striking first is even worse.

One common characteristic of scenarios is that they are compounded of odd elements. How can the Soviet Union suffer disastrous defeat in a peripheral war? If the war is peripheral, defeat may be embarrassing, but hardly disastrous. Another common characteristic of scenarios is the failure to say how the imagined act will accomplish the end in view. Some rulers will do anything to save themselves and their regimes. That is the assumption. But how a regime can hope to save itself by making a nuclear strike at a superior adversary, or at any adversary having a second-strike force, is not explained. Why is not striking first even worse than doing so, and in what way does it entail a smaller risk? We are not told. The most important common characteristic of scenarios, and often their fatal flaw, is also present in this one. The scenarist imagines a state in the midst of a terrible crisis in which the alternatives are so bad that launching a first strike supposedly makes some sense, but he does not say how this situation might come about. How could the Soviet Union get into such a mess, and what would other states be doing in the meantime? Scenarios often feature just one player, keeping others in the background even though two or more states are necessarily involved in making and in preventing wars. To think that the Soviet Union would strike the United States because of incipient revolt within her borders is silly. To think that the Soviet Union would strike first believing that we were about to do so is not. One must then ask how the US would behave if the USSR were seen to be in a perilous condition. It is sometimes surprisingly difficult for strategists to think of the actions and interactions of two or more states at the same time. No country will goad a nuclear adversary that finds itself in sad straits.

When vital interests are at stake, all of the parties involved are strongly constrained to be moderate because one's immoderate behaviour makes the nuclear threats of others credible. No one would want to provoke an already desperate country if that country had strategic nuclear weapons. Equally, a regime in crisis would desperately want to avoid calling nuclear warheads down upon itself. What scenarists imagine seldom has much to do with how governments behave. The bizarre qualities of various scenarios that depict a failure of deterrence strengthens one's confidence in it.

Three confusions mark many discussions of deterrence. First, that nuclear weapons affect the deterrer as well as the deterred is often overlooked. The many who fear that a country will foolishly launch missiles in a moment of panic overlook the care other countries will take in order not to make a nuclear country excessively nervous. Second, those who are sceptical of deterrence easily slip back from nuclear logic, by which slight risk of great damage deters, to conventional logic, by which states may somewhat sensibly risk war on narrowly calculated advantages. Thus some Americans fear that the Soviet Union will strike first – destroying most of our land-based warheads, planes on the ground, submarines in port, and much else besides. The strike would be made on the chance that we would not strike back with some of our thousands of remaining warheads. But states do not risk immense losses unless the odds on succeeding are overwhelmingly high. No one can say what the odds might be. Third, the quality of states' external behaviour is commonly inferred from their internal characteristics. Thus many emphasize the importance of *who* the new nuclear states will be and dwell on the question of whether their rulers will be 'rational'. They have failed to notice that radical states usually show caution in their foreign policies and to notice that nuclear weapons further moderate the behaviour of such states when vital interests are at issue. Nuclear peace depends not on rulers and those around them being rational but on their aversion to running catastrophic risks.

Arms Races among New Nuclear States

One may easily believe that American and Russian military doctrines have set the pattern that new nuclear states will follow. One may then also believe that they will suffer the fate of the United States and the Soviet Union, that they will compete in building larger and larger nuclear arsenals while continuing to accumulate conventional weapons. These are doubtful beliefs. One can infer the future from the past only insofar as future situations may be like present ones for the actors involved. For four main reasons, new nuclear states are likely to decrease rather than to increase their military spending.

First, nuclear weapons alter the dynamics of arms races. In a competition of two or more parties, it may be hard to say who is pushing and who is being pushed, who is leading and who is following. If one party seeks to increase its capabilities, it may seem that the other(s) must too. The dynamic may be built into the competition and may unfold despite a mutual wish to resist it. But need this be the case in a strategic competition between nuclear countries? It need not be if the conditions of competition make deterrent logic dominant. Deterrent logic dominates if the conditions of competition make it nearly impossible for any of the competing parties to achieve a first-strike capability. Early in the nuclear age, the implications of deterrent strategy were clearly seen. 'When dealing with the absolute weapon', as William T. R. Fox put it, 'arguments based on relative advantage lose their point'.[45] The United States has sometimes designed her forces according to that logic. Donald A. Quarles argued when he was Eisenhower's Secretary of the Air Force that 'sufficiency of air power' is determined by 'the force required to accomplish the mission assigned'. Avoidance of total war then does not depend on the '*relative* strength of the two opposed forces'. Instead, it depends on the '*absolute* power in the hands of each, and in the substantial invulnerability of this power to interdiction'.[46] To repeat: If no state can launch a disarming attack with high confidence, force comparisons are irrelevant. Strategic arms races are then pointless. Deterrent strategies offer this great advantage: Within wide ranges neither side need respond to increases in the other side's military capabilities.

Those who foresee nuclear arms racing among new nuclear states fail to make the distinction between war-fighting and war-deterring capabilities. War-fighting forces, because they threaten the forces of others, have to be compared. Superior forces may bring victory to one country; inferior forces may bring defeat to another. Force requirements vary with strategies and not just with the characteristics of weapons. With war-fighting strategies, arms races become difficult, if not impossible, to avoid. Forces designed for deterring war need not be compared. As Harold Brown said when he was Secretary of Defense, purely deterrent forces 'can be relatively modest, and their size can perhaps be made substantially, though not completely, insensitive to changes in the posture of an opponent'.[47] With deterrent strategies, arms races make sense only if a first-strike capability is within reach. Because thwarting a first strike is easy, deterrent forces are quite cheap to build and maintain. With deterrent forces, the question is not whether one country has more than another but whether it has the capability of inflicting 'unacceptable damage' on another, with unacceptable damage sensibly defined. Once that capability is assured, additional strategic weapons are useless. More is not better if less is enough.

Deterrent balances are also inherently stable. If one can say how much is enough, then within wide limits a country can be insensitive to changes in its adversaries' forces. This is the way French leaders have thought. France, as former President Giscard d'Estaing said,'fixes its security at the level required to maintain, regardless of the way the strategic situation develops in the world, the credibility – in other words, the effectiveness – of its deterrent force'.[48] With deterrent forces securely established, no military need presses one side to try to surpass the other. Human error and folly may lead some parties involved in deterrent balances to spend more on armaments than is needed, but other parties need not increase their armaments in response, because such excess spending does not threaten them. The logic of deterrence eliminates incentives for strategic arms racing. This should be easier for lesser nuclear states to understand than it has been for the US and the USSR. Because most of them are economically hard pressed, they will not want to have more than enough.

Allowing for their particular circumstances, lesser nuclear states confirm these statements in their policies. Britain and France are relatively rich countries, and they tend to overspend. Their strategic forces are nevertheless modest enough when one considers that their purpose is to deter the Soviet Union rather than states with capabilities comparable to their own. China of course faces the same task. These three countries show no inclination to engage in nuclear arms races with anyone. India appears content to have a nuclear military capability that may or may not have produced deliverable warheads, and Israel maintains her ambiguous status. New nuclear states are likely to conform to these patterns and aim for a modest sufficiency rather than vie with each for a meaningless superiority.

Second, because strategic nuclear arms races among lesser powers are unlikely, the interesting question is not whether they will be run but whether countries having strategic nuclear weapons can avoid running conventional races. No more than the United States and the Soviet Union will lesser nuclear states want to rely on the deterrent threat that risks all. And will not their vulnerability to conventional attack induce them to continue their conventional efforts?

American policy as it has developed since the early 1960s again teaches lessons that mislead. For almost two decades, we have emphasized the importance of having a continuum of forces that would enable the United States and her allies to fight at any level from irregular to strategic nuclear warfare. A policy that decreases reliance on deterrence increases the chances that wars will be fought. This was well appreciated in Europe when we began to place less emphasis on deterrence and more on defence. The worries of many Europeans were well expressed by a senior British general in the following words:'McNamara is practically telling the Soviets that the worst they need to expect from an attack on West Germany is a conventional counterattack'.[49] Why risk one's own destruction if one is able to fight on the ground and forgo the use of strategic weapons?

The policy of flexible response lessened reliance on strategic deterrence and increased the chances of fighting a war. New nuclear states are not likely to experience this problem.

The expense of mounting conventional defences, and the difficulties and dangers of fighting conventional wars, will keep most new nuclear states from trying to combine large war-fighting forces with deterrent forces. Disjunction within their forces will enhance the value of deterrence.

Israeli policy seems to contradict these propositions. From 1971 through 1978, both Israel and Egypt spent from 20% to 40% of their GNPs on arms. Israel's spending on conventional arms remains high, although it has decreased since 1978. The decrease followed from the making of peace with Egypt and not from increased reliance on nuclear weapons. The seeming contradiction in fact bears out deterrent logic. So long as Israel holds the West Bank and the Gaza Strip she has to be prepared to fight for them. Since they are by no means unambiguously hers, deterrent threats, whether implicit or explicit, will not cover them. Moreover, while America's large subsidies continue, economic constraints will not drive Israel to the territorial settlement that would shrink her borders sufficiently to make a deterrent policy credible.

From previous points it follows that nuclear weapons are likely to decrease arms racing and reduce military costs for lesser nuclear states in two ways. Conventional arms races will wither if countries shift emphasis from conventional defence to nuclear deterrence. For Pakistan, for example, acquiring nuclear weapons is an alternative to runnning a ruinous conventional race with India.[50] And deterrent strategies make nuclear arms races pointless.

Finally, arms races in their ultimate form – the fighting of offensive wars designed to increase national security – also become pointless. The success of a deterrent strategy does not depend on the extent of territory a state holds, a point made earlier. It merits repeating because of its unusual importance for states whose geographic limits lead them to obsessive concern for their security in a world of ever more destructive conventional weapons.

The Frequency and Intensity of War

The presence of nuclear weapons makes wars less likely. One may nevertheless oppose the spread of nuclear weapons on the ground that they would make war, however unlikely, unbearably intense should it occur. Nuclear weapons have not been fired in anger in a world in which more than one country has them. We have enjoyed three decades of nuclear peace and may enjoy many more. But we can never have a guarantee. We may be grateful for decades of nuclear peace and for the discouragement of conventional war among those who have nuclear weapons. Yet the fear is widespread, and naturally so, that if they ever go off, we may all die. People as varied as the scholar Richard Smoke, the arms controller Paul Warnke, and former Defense Secretary Harold Brown all believe that if any nuclear weapons go off, many will. Although this seems the least likely of all the unlikely possibilities, it is not impossible. What makes it so unlikely is that, even if deterrence should fail, the prospects for rapid de-escalation are good.

McNamara asked himself what fractions of the Soviet Union's population and industry the United States should be able to destroy in order to deter her. For military, although not for budgetary, strategy this was the wrong question. States are not deterred because they expect to suffer a certain amount of damage but because they cannot know how much damage they will suffer. Near the dawn of the nuclear age Bernard Brodie put the matter simply:'The prediction is more important than the fact'.[51] The prediction, that is, that attacking the vital interests of a country having nuclear weapons may bring the attacker untold losses. As Patrick Morgan more recently put it:'To attempt to "compute" the cost of a nuclear war is to miss the point'.[52]

States are deterred by the prospect of suffering severe damage and by their physical inability to do much to limit it. Debate over the Soviet Union's civil defence efforts calls attention to this inability. Defensive measures can reduce casualties, but they would still be immense were either of the great powers to launch a determined attack. Moreover, civil defence cannot save the Soviet Union's heavily concentrated industries. Warheads numbered in the hundreds can destroy the United States and the Soviet Union as viable societies no matter what defensive measures they take. Deterrence works because nuclear weapons enable one state to punish another state severely without first defeating it. 'Victory', in Thomas Schelling's words, 'is no longer a prerequisite for hurting the enemy'.[53] Countries armed only with conventional weapons can hope that their military forces will be able to limit the damage an attacker can do. Among countries armed with strategic nuclear forces, the hope of avoiding heavy damage depends mainly on the attacker's restraint and little on one's own efforts. Those who compare expected deaths through strategic exchanges of nuclear warheads with casualties suffered by the Soviet Union in World War II overlook this fundamental difference between conventional and nuclear worlds.

Deterrence rests on what countries *can* do to each other with strategic nuclear weapons. From this statement, one easily leaps to the wrong conclusion: that deterrent strategies, if they have to be carried through, will produce a catastrophe. That countries are able to annihilate each other means neither that deterrence depends on their threatening to do so nor that they will do so if deterrence fails. Because countries heavily armed with strategic nuclear weapons can carry war to its ultimate intensity, the control of force, in wartime as in peacetime, becomes the primary objective. If deterrence fails, leaders will have the strongest incentives to keep force under control and limit damage rather than launching genocidal attacks. If the Soviet Union should attack Western Europe, NATO's objectives would be to halt the attack and end the war. The United States has long had the ability to place hundreds of warheads precisely on targets in the Soviet Union. Surely we would strike military targets before striking industrial targets and industrial targets before striking cities. The intent to do so is sometimes confused with a war-fighting strategy, which it is not. It would not significantly reduce the Soviet Union's ability to hurt us. It is a deterrent strategy, resting initially on the threat to punish. The threat, if it fails to deter, is appropriately followed not by spasms of violence but by punishment administered in ways that convey threats to make the punishment more severe.

For several reasons, then, deterrent strategies promise less damage than war-fighting strategies. First, deterrent strategies induce caution all around and thus reduce the incidence of war. Second, wars fought in the face of strategic nuclear weapons must be carefully limited because a country having them may retaliate if its vital interests are threatened. Third, prospective punishment need only be proportionate to an adversary's expected gains in war after those gains are discounted for the many uncertainties of war. Fourth, should deterrence fail, a few judiciously delivered warheads are likely to produce sobriety in the leaders of all of the countries involved and thus bring rapid de-escalation.

A deterrent strategy promises less damage, should deterrence fail, than does the Schlesinger-Brown 'countervailing' strategy, a strategy which contemplates fighting a limited, strategic nuclear war. War-fighting strategies offer no clear place to stop short of victory for some and defeat for others. Deterrent strategies do, and that place is where one country threatens another's vital interests. Deterrent strategies lower the probability that wars will be fought. If wars are nevertheless fought, deterrent strategies lower the probability that they will become wars of high intensity.

A war between the United States and the Soviet Union that did get out of control would be catastrophic. If they set out to destroy each other, they would greatly reduce the world's store of developed resources while killing millions outside of their own borders through fallout. Even while destroying themselves, states with few weapons would do less damage to others. As ever, the biggest international dangers come from the strongest states. Fearing the world's destruction, one may prefer a world of conventional great powers having a higher probability of fighting less destructive wars to a world of nuclear great powers having a lower probability of fighting more destructive wars. But that choice effectively disappeared with the production of atomic bombs by the United States during World War II. Since the great powers are unlikely to be drawn into the nuclear wars of others, the added global dangers posed by the spread of nuclear weapons are small.

The spread of nuclear weapons threatens to make wars more intense at the local and not at the global level, where wars of the highest intensity have been possible for a number of years. If their national existence should be threatened, weaker countries, unable to defend at lesser levels of violence, may destroy themselves through resorting to nuclear weapons. Lesser nuclear states will live in fear of this possibility. But this is not different from the fear under which the United States and the Soviet Union have lived for years. Small nuclear states may experience a keener sense of desperation because of extreme vulnerability to conventional as well as to nuclear attack, but, again, in desperate situations what all parties become most desperate to avoid is the use of strategic nuclear weapons. Still, however improbable the event, lesser states may one day fire some of their weapons. Are minor nuclear states more or less likely to do so than major ones? The answer to this question is vitally important because the existence of some states would be at stake even if the damage done were regionally confined.

Looking at the situation of weaker nuclear states and at the statements of stronger nuclear states, one suspects that weak states are less likely to use nuclear weapons first than are strong ones. Many have worried about conventional wars between minor nuclear states becoming nuclear wars as one side loses. It is NATO, however, that plans to use nuclear weapons in battle if conventional troops cannot hold. Moreover, after the Soviet Union invaded Afghanistan in December of 1979, American officials considered using nuclear weapons in the Middle East if need be. At various times, some Americans have thought of reasons for making limited counterforce strikes – firing a few missiles at the Soviet Union to show our determination – an idea revived by James R. Schlesinger when he was Secretary of Defense. Among others, Generals Earle G. Wheeler and George Brown, former chairmen of the Joint Chiefs of Staff, have talked of our emerging from a nuclear war with a 'relative advantage' over the Soviet Union by targeting their 'war recovery capabilities'.[54] Presidential Directive 59, signed by President Carter in July of 1980, contemplates fighting a limited nuclear war, perhaps a prolonged one, if deterrence should fail. And some of the Soviet Union's military leaders have publicly discussed using nuclear weapons to win wars.

The United States and the Soviet Union have more readily contemplated the use of nuclear weapons than lesser nuclear states have done or are likely to do. But planning is distinct from deciding to act. Planners think they should offer Presidents a range of choices and a variety of nuclear weapons to carry them through. In the event, Presidents, like Party Chairmen, will shy away from using nuclear weapons and will act with extreme care in dealing with situations that might get out of control, as they have done in the past. New nuclear states are likely to be even more mindful of dangers and more concerned for their safety than some of the old ones have been. Ordinarily, weak states calculate more fearfully and move more cautiously than strong ones. The thought that fear and caution may lead insecure countries to launch preventive or preemptive strikes has amplified anxieties about the instability of regions populated by lesser nuclear powers and about the extent of destruction their weapons may bring. Such worries rest on inferences drawn from the behaviour of conventional states and do not apply to nuclear ones, for reasons already discussed.

Nuclear weapons lessen the intensity as well as the frequency of war among their possessors. For fear of escalation, nuclear states do not want to fight long or hard over important interests – indeed, they do not want to fight at all. Minor nuclear states have even better reasons than major ones to accommodate one another peacefully and to avoid any fighting. Worries about the intensity of war among nuclear states have to be viewed in this context and against a world in which conventional weapons become ever costlier and more destructive.

The Roles and Reactions of the Great Powers

Should a great power help a lesser one improve its force once it has shown the will and the ability to build one? Will great powers be drawn into the nuclear confrontations of lesser ones, or will they draw away from them to avoid involvement? Will small nuclear powers cut themselves adrift from the great powers and follow independent policies? Will small countries' nuclear forces trigger an arms race between the great powers? These questions suggest four ways in which big and small nuclear powers may interact.

small and crude forces tempt pre-emption, so it is thought, and may be used in reckless and unintended ways because of inadequate command and control. These dangers can be removed by great powers assisting lesser ones in building and managing their forces. Nevertheless, neither the United States nor the Soviet Union will want to help much, lest countries come to believe that they can build insufficient and unreliable forces and rely on one of the great powers to turn them into something substantial. Such hindrance is unfortunate, if improving others' forces serves wider interests. Is help required, not just for the sake of the recipient, but also to avoid nuclear imbalances between states that might prompt wars and to reduce the chances of accidents that might set them off? We saw earlier that these are minor worries. Because they are minor, the United States and the Soviet Union are not likely to be tempted to give technical help to countries entering the nuclear military business.

Nuclear weapons in the hands of six or seven states have lessened wars and limited conflicts. The further spread of nuclear weapons can be expected to widen those effects. Should the United States then promote the spread of nuclear weapons for the sake of peace, even though we need not for the sake of stability? To do so would replace one extreme policy with another. Present policy works hard to prevent additional states from acquiring nuclear weapons. My examination of the effects of nuclear weapons leads to the conclusion that our policy is wrong without supporting the proposition that true proliferation – the rapid spread of nuclear weaponry – is desirable. Rapid change may be destabilizing. The slow spread of nuclear weapons gives states time to learn to live with them, to appreciate their virtues, and to understand the limits they place on behaviour.

Will the United States and the Soviet Union be drawn into the struggles of lesser nuclear states? This question loses much of its urgency given the aversion of states to crises that raise the spectre of nuclear war and the care they take in crises that do so. Will they then draw away from other states' crises rather than being drawn in? The United States and the Soviet Union will continue to have interests in various parts of the world for all of the old political, economic, and military reasons. In a region where nuclear powers are locked in dispute, the great powers will move cautiously in attempting to tend to their separate and to their common interests. We can hardly expect the United States or the Soviet Union to risk more in other people's crises than they have risked in their own. Neither the United States nor the Soviet Union want a regional nuclear confrontation to become a global one. If that risk hangs over them, their strong mutual interest is to withdraw.

Will lesser nuclear powers want to edge away from their great-power patrons in order to be able to choose their policies more freely? To do so would be risky. A nuclear Israel, for example, may threaten to fire missiles at her attackers' cities if ever their victory in war seems likely. In the face of possible Russian opposition, signs of American acquiescence in Israel's policy would help to make the prospect of retaliation credible. Any lesser power contemplating the use of nuclear weapons even for deterrent or defensive purposes will expect opposition from at least one of the great powers. An alliance or some other kind of connection with one of them may stay the hand of the other. This is another way of saying that even with nuclear weapons weaker states continue to depend on stronger states in various ways.

By acquiring nuclear weapons a state changes one variable in a complex equation of forces. That variable is the most important one. Nuclear weapons increase the ability of states to fend for themselves when the integrity of their legitimate boundaries is at stake. Thus an Israeli deterrent force would enable Israel to maintain her legitimate boundaries while reducing her extreme dependence on the United States. In recent years our aid has amounted to a seventh or an eighth of Israel's GNP yearly. Such dependence will substantially lessen only if military security becomes less of a concern or can be more cheaply provided. Nuclear weapons and strategies, however, do not cover all of the military problems of new nuclear states nor are military problems the whole of their concerns. Israeli dependence on the United States will not disappear so long as she remains a small country in a hostile world. Similarly, the deterrent effect of China's nuclear weapons makes her less dependent on others militarily, without much reducing her need for economic and technical assistance. Nuclear weapons are useful against threats to a state's territorial integrity, but most of the doings of states fall far short of this extreme. Independent nuclear forces reduce dependency by lesser powers on others without eliminating it.

Will the nuclear arms of lesser powers stimulate the great powers to further exertion? And will arms control and disarmament agreements be harder to reach? Consider arms racing first. A faster race between the great powers may come about in the following way, and to some extent already has. The United States or the Soviet Union builds more missiles and more defences against missiles as she perceives a growing threat from China. The increased effort of one of the great powers prompts the other to try harder, and the effects become reciprocating causes. Action, reaction, and over-reaction by the United States and the Soviet Union have formed a pattern too familiar to disregard. The pattern is likely to repeat itself, but it need not.

Consider a historical case. In 1967, McNamara half-heartedly proposed deploying a cheap ($5-billion) ABM system designed to handle an attack by China even though, as he said, we had 'the power not only to destroy completely her entire nuclear offensive forces, but to devastate her society as well'. Whatever his political and bureaucratic reasons, he publicly argued that a light ABM system offered four advantages:

1) China might miscalculate.
2) America would be showing Asian states that she would not let China blackmail them and would thus dampen their desires to have their own nuclear weapons.
3) America would gain marginal protection for *Minuteman* sites against an attack by the Soviet Union.
4) America would be safe against accidental launchings.[55]

Had the United States persisted in building a 'Chinese' system, this might have prompted further efforts by the Soviet Union. The United States and the Soviet Union can react to third countries' nuclear forces in ways that stimulate their own competition in arms, but they need not do so, as is shown by examining McNamara's four reasons. His fourth reason applies to any and all nuclear countries. It raises the question of the value of taking out an ABM insurance policy against accidental firings whether by third countries, by the Soviet Union, or by the United States. His third reason applies explicitly to the Soviet Union and not to third nuclear countries. His second reason rests on a false belief about the feasibility of nuclear blackmail. Only the first of McNamara's reasons applies specifically to the forces of China or of any lesser nuclear country. It raises this question: Under any imaginable circumstances, might a lesser nuclear country's miscalculation lead it to launch an attack on the United States? The miscalculation would have to be monumental. Building missile defences against China would imply that great powers can deter each other but cannot deter minor ones. The weakness of the proposition is apparent.

Nor need more missiles be added to either great power's arsenal in order to deter lesser nuclear powers, even should the great powers fail to deter each other. In 1978, the United States had about 2,150 warheads on land-based launchers, about 5,120 on sea-based launchers, and about 2,580 in bombers.[56] These numbers had changed little by 1980. One study estimates that the Soviet Union's best attack, launched in the mid-1980s and coming at the worst time for us with our forces only on normal day-to-day alert, would leave us with about 6,400 warheads and about 1,800 equivalent megatons. After such an attack, the Soviet Union would have about 6,000 warheads left and 6,000 equivalent megatons. We would still have more than we need since 1,000 *Poseidon* warheads (the force loading of some six submarines) can 'destroy about 75 percent of the Soviet industrial targets'. With our present force we can absorb a first strike and still destroy the Soviet Union as 'a modern industrial society', and do so with missiles to spare for counterforce attacks.[57] And we and they would have more than enough left over to deter third countries. This plenitude of deliverable warheads is sometimes referred to as 'sufficiency'. The great powers scarcely need get into an arms race because of what lesser powers do.

Still, the United States and the Soviet Union do race from time to time, and the racing has been fuelled in part by what third countries have done. The Soviet Union, for example, argues that many of her intermediate and medium-range ballistic missiles are needed because of the threat posed by China. Some of the NATO countries then conclude that because these missiles threaten Western Europe, cruise issiles and *Pershing* IIs must be deployed there. This then further worries the Soviet Union. No one doubts these effects.

Strategic arms races between the United States and the Soviet Union, however, are produced mainly by the strategies they follow and by the kinds of forces they build. In their strategies, dissuasion by deterrence has always been alloyed with defensive and war-fighting policies and capabilities. The number of Russian cities worth striking is finite and indeed quite low. We have long had more survivable warheads than Russian cities to strike. If only cities were aimed at, many warheads would lack targets. The quantity of warheads on hand and their increased accuracy constitute arguments for a counterforce strategy. In the last two decades, the balance between deterrent strategy and war-fighting strategy has tilted towards the latter. Available weapons affect the strategy a country adopts, and the strategy that is fashioned in turn calls for the further development of weapons. If each side views the other's strategic forces as designed for fighting wars as much as, or more than, for deterring them, then arms races become very difficult to avoid. Such perceptions vary with changes in the strategies and forces of the great powers, not of the lesser ones. Great powers engage in arms races mainly because of what other great powers do. That was true in a multipolar, conventional world; it remains true in a bipolar, nuclear world.

CONCLUSION

The conclusion is in two parts. After saying what follows for American policy from my analysis, I briefly state the main reasons for believing that the slow spread of nuclear weapons will promote peace and reinforce international stability.

Implications for American Policy

I have argued that the gradual spread of nuclear weapons is better than no spread and better than rapid spread. We do not face a set of happy choices. We may prefer that countries have conventional weapons only, do not run arms races, and do not fight. Yet the alternative to nuclear weapons for some countries may be ruinous arms races with high risk of their becoming engaged in debilitating conventional wars.

Countries have to care for their security with or without the help of others. If a country feels highly insecure and believes that nuclear weapons will make it more secure, America's policy of opposing the spread of nuclear weapons will not easily determine theirs. Any slight chance of bringing the spread of nuclear weapons to a full stop exists only if the United States and the Soviet Union constantly and strenuously try to achieve that end. To do so carries costs measured in terms of their other interests. The strongest means by which the United States can persuade a country to forgo nuclear weapons is a guarantee of its security, especially if the guarantee is made credible by the presence of American troops. But how many commitments do we want to make, and how many countries do we want to garrison? We are wisely reluctant to give guarantees, but we then should not expect to decide how other countries are to provide for their security. As a neighbour of China, India no doubt feels more secure, and can behave more reasonably, with a nuclear-weapons capability than without it. The thought applies as well to Pakistan as India's neighbour. We damage our relations with such countries by badgering them about nuclear weapons while being unwilling to guarantee their security. Under such circumstances they, not we, should decide what their national interests require.

If the United States and the Soviet Union lessen their opposition to the spread of nuclear weapons, will not many states jump on the nuclear bandwagon? Some have feared that weakening opposition to the spread of nuclear weapons will lead numerous states to make them because it may seem that 'everyone is doing it'.[58]

Why should we think that if the United States relaxes, numerous states will begin to make nuclear weapons? Both the United States and the Soviet Union were more relaxed in the past, and these effects did not follow. The Soviet Union initially furthered China's nuclear development. The United States continues to help Britain maintain her deterrent forces. By 1968 the CIA had informed President Johnson of the existence of Israeli nuclear weapons, and in July of 1970 Richard Helms, Director of the CIA, gave this information to the Senate Foreign Relations Committee. These and later disclosures were not followed by censure of Israel or by reductions of assistance to her.[59] And in September of 1980 the Executive Branch, against the will of the House of Representatives but with the approval of the Senate, continued to do nuclear business with India despite her explosion of a nuclear device and despite her unwillingness to sign the Nuclear Non-Proliferation Treaty.

Assisting some countries in the development of nuclear weapons and failing to oppose others has not caused a nuclear stampede. Is the more recent leniency towards India likely to? One reason to think so is that more countries now have the ability to make their own nuclear weapons, more than forty of them according to Joseph Nye.[60]

Many more countries can than do. One can believe that American opposition to nuclear arming stays the deluge only by overlooking the complications of international life. Any state has to examine many conditions before deciding whether or not to develop nuclear weapons. Our opposition is only one factor and is not likely to be the decisive one. Many countries feel fairly secure living with their nieghbours. Why should they want nuclear weapons? Some countries, feeling threatened, have found security through their own strenuous efforts and through arrangements made with others. South Korea is an outstanding example. Many South Korean officials believe that South Korea would lose more in terms of American support if she acquired nuclear weapons than she would gain by having them.[61] Further, on occasion we might slow the spread of nuclear weapons by *not* opposing the nuclear-weapons programmes of some countries. When we oppose Pakistan's nuclear programme, we are saying that we disapprove of countries developing nuclear weapons no matter what their neighbours do. Failing to oppose Pakistan's efforts also sends a signal to potential nuclear states, suggesting that if a country develops nuclear weapons, a regional rival may do so as well and may do so without opposition from us. This message may give pause to some of the countries that are tempted to acquire nuclear weapons. After all, Argentina is to Brazil as Pakistan is to India.

Neither the gradual spread of nuclear weapons nor American and Russian acquiescence in this has opened the nuclear floodgates. Nations attend to their security in ways they think best. The fact that so many more countries can make nuclear weapons than do make them says more about the hesitation of countries to enter the nuclear military business than about the effectiveness of American policy. We can sensibly suit our policy to individual cases, sometimes bringing pressure against a country moving towards nuclear-weapons capability and sometimes quietly acquiescing. No one policy is right for all countries. We should ask what our interests in regional peace and stability require in particular instances. We should also ask what the interests of other countries require before putting pressure on them. Some countries are likely to suffer more in cost and pain if they remain conventional states than if they become nuclear ones. The measured and selective spread of nuclear weapons does not run against our interests and can increase the security of some states at a price they can afford to pay.

It is not likely that nuclear weapons will spread with a speed that exceeds the ability of their new owners to adjust to them. The spread of nuclear weapons is something that we have worried too much about and tried too hard to stop.

The Nuclear Future

What will a world populated by a larger number of nuclear states look like? I have drawn a picture of such a world that accords with experience throughout the nuclear age. Those who dread a world with more nuclear states do little more than assert that more is worse and claim without substantiation that new nuclear states will be less responsible and less capable of self-control than the old ones have been. They express fears that many felt when they imagined how a nuclear China would behave. Such fears have proved unfounded as nuclear weapons have slowly spread. I have found many reasons for believing that with more nuclear states the world will have a promising future. I have reached this unusual conclusion for six main reasons.

First, international politics is a self-help system, and in such systems the principal parties do most to determine their own fate, the fate of other parties, and the fate of the system. This will continue to be so, with the United States and the Soviet Union filling their customary roles. For the United States and the Soviet Union to achieve nuclear maturity and to show this by behaving sensibly is more important than preventing the spread of nuclear weapons.

Second, given the massive numbers of American and Russian warheads, and given the impossibility of one side destroying enough of the other side's missiles to make a retaliatory strike bearable, the balance of terror is indestructible. What can lesser states do to disrupt the nuclear equilibrium if even the mighty efforts of the United States and the Soviet Union cannot shake it? The international equilibrium will endure.

Third, at the strategic level each of the great powers has to gauge the strength only of itself in relation to the other. They do not have to make guesses about the strengths of opposing coalitions, guesses that involve such imponderables as the coherence of diverse parties and their ability to concert their efforts. Estimating effective forces is thus made easier. Wars come most often by miscalculation. Miscalculation will not come from carelessness and inattention in a bipolar world as it may in a multipolar one.

Fourth, nuclear weaponry makes miscalculation difficult because it is hard not to be aware of how much damage a small number of warheads can do. Early in this century Norman Angell argued that wars could not occur because they would not pay.[62] But conventional wars have brought political gains to some countries at the expense of others. Germans founded a state by fighting three short wars, in the last of which France lost Alsace-Lorraine. Among nuclear countries, possible losses in war overwhelm possible gains. In the nuclear age Angell's dictum, broadly interpreted, becomes persuasive. When the active use of force threatens to bring great losses, wars become less likely. This proposition is widely accepted but, insufficiently emphasized. Nuclear weapons have reduced the chances of war between the United States and the Soviet Union and between the Soviet Union and China. One may expect them to have similar effects elsewhere. Where nuclear weapons threaten to make the cost of wars immense, who will dare to start them? Nuclear weapons make it possible to approach the deterrent ideal.

Fifth, nuclear weapons can be used for defence as well as for deterrence. Some have argued that an apparently impregnable nuclear defence can be mounted. The Maginot Line has given defence a bad name. It nevertheless remains true that the incidence of wars decreases as the perceived difficulty of winning them increases. No one attacks a defence believed to be impregnable. Nuclear weapons may make it possible to approach the defensive ideal. If so, the spread of nuclear weapons will further help to maintain peace.

Sixth, new nuclear states will confront the possibilities and feel the constraints that present nuclear states have experienced. New nuclear states will be more concerned for their safety and more mindful of dangers than some of the old ones have been. Until recently, only the great and some of the major powers have had nuclear weapons. While nuclear weapons have spread, conventional weapons have proliferated. Under these circumstances, wars have been fought not at the centre but at the periphery of international politics. The likelihood of war decreases as deterrent and defensive capabilities increase. Nuclear weapons, responsibly used, make wars hard to start. Nations that have nuclear weapons have strong incentives to use them responsibly. These statements hold for small as for big nuclear powers. Because they do, the measured spread of nuclear weapons is more to be welcomed than feared.

NOTES

[1] Unless otherwise specified, data are from *The Military Balance* (London: IISS), yearly volumes.

[2] Federal Minister of Defence, *White Paper: The Security of the Federal Republic of Germany and the Development of the Federal Armed Forces* (Bonn, 1979), p. 276.

[3] Geoffrey Blainey, *The Causes of War* (London: Macmillan, 1970), pp. 108–19.

[4] Cf. Kenneth N. Waltz, *Theory of International Politics* (Reading, Mass.: Addison-Wesley, 1979), ch. 8, parts II and III.

[5] Cf. John J. Weltman, 'Nuclear Devolution and World Order', *World Politics*, vol. 32, January 1980, pp. 172–4.

[6] Cf. Robert J. Art and Kenneth N. Waltz, 'Technology, Strategy, and the Uses of Force', *The Use of Force* (Boston: Little, Brown, 1971), pp. 6–11.

[7] Cf. *ibid*. For the different implications of defence and deterrence, see Glenn H. Snyder, *Deterrence and Defense* (Princeton: Princeton University Press, 1961).

[8] Robert Jervis, 'Cooperation under the Security Dilemma', *World Politics*, vol. 30, January 1978. Cf. Malcolm W. Hoag, 'On Stability in Deterrent Races', *World Politics*, vol. 13, July 1961; Stephen Van Evera, 'Nuclear Weapons, Nuclear Proliferation, and the Causes of War', (unpublished paper, 1978).

[9] See Richard Smoke, *War: Controlling Escalation* (Cambridge, Mass.: Harvard University Press, 1977), pp. 175–88.

[10] Glenn H. Snyder, *op. cit.* in note 7, p. 44; Stephen Van Evera, 'The Effects of Nuclear Proliferation' (unpublished paper, 1976).

[11] See Snyder, *op.cit.* in note 7, pp. 37, 49, 79–82; Bernard Brodie, *Escalation and the Nuclear Option* (Princeton: Princeton University Press, 1966), pp. 74–8; Robert Jervis, 'Deterrence Theory Revisited', *World Politics*, vol. 31, January 1979; and Shai Feldman, *Israeli Nuclear Deterrence: A Strategy for the 1980s?* (Berkeley, Calif.: Ph.D. dissertation, 1980), *passim*.

[12] Bernard Brodie, *War and Politics* (New York: Macmillan, 1973), p. 321.

[13] Georg Simmel, 'The Sociology of Conflict, I', *American Journal of Sociology*, vol. 9, January 1904, p. 501.

[14] George Sansom, 'Japan's Fatal Blunder', *International Affairs*, October 1948 (in Art and Waltz, *op. cit.* in note 6), pp. 208–9.

[15] I shall concentrate on nuclear deterrence and slight nuclear defence. A defensive nuclear doctrine, although it has not been welcomed in American or NATO military circles, was at times supported by Bernard Brodie and has been persuasively expounded by Sandoval, Shreffler, and a few others. See, for example, R.R. Sandoval, 'Consider the Porcupine: Another View of Nuclear Proliferation', *Bulletin of the Atomic Scientists*, vol. 32, May 1976; R. Shreffler and R.R. Sandoval; *Nuclear Weapons, Their Role in U.S. Political and Military Posture, and an Example* (Los Alamos Scientific Laboratory, September 1975); and R. Shreffler, 'The New Nuclear Force', in *Tactical Nuclear Weapons: European Perspectives* (Stockholm: International Peace Research Institute Yearbook, 1978).

[16] *Hansard*, 1 March 1960, cols 1136–8.

[17] Michael Nacht, 'The United States in a World of Nuclear Powers', in Joseph I. Coffey (ed.), *Nuclear Proliferation: Prospects, Problems, and Proposals* (Philadelphia: The Annals of the American Academy of Political Science, 1977), pp. 163–4.

[18] Ashok Kapur, 'Nth Powers of the Future', in Coffey, *op. cit.* in note 17, p. 94.

[19] *New York Times*, 20 June 1980, p. A3, 'U.S. Says Decision on Atom Fuel for India is Tied to Afghan Crisis'.

[20] Richard Burt, 'Russia Shares Dilemma over Nuclear Spread', *New York Times*, 20 July 1980, p. E5.

[21] Cf. Lewis A. Dunn, 'Nuclear Proliferation and World Politics', in Coffey, *op. cit.* in note 17, pp. 102–7.

[22] Stephen Van Evera, *op. cit.* in note 10.

[23] Shai Feldman, *op. cit.* in note 11, ch. 4.

[24] *Ibid.*, Table 1.

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Nuclear Power and Nuclear Weapons: The Tenuous Link

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Abstract In the debates over nuclear nonproliferation, a close link is often ascribed between the development [illegible]clear power facilities and a nuclear weapons capability. This putative linkage appears to underlie much of U.S. nonproliferation policy through a number of Administrations. Yet the historical record does not substantiate this relationship. Nuclear weapons have invariably *preceded* civilian power reactors; there are a great many nations with nuclear power reactors which have little reason or cause to develop nuclear weapons. This questionable linkage has several direct policy implications for U.S. nuclear nonproliferation policy, which heretofore has been characterized by serious inconsistencies that are, in part, the result of an erroneous reading of other nations' nuclear capabilities and intentions.

I. Introduction

One of the recurrent nightmares of the post-Hiroshima world has been the proliferation of nuclear weapons. Almost as soon as the Alamogordo tests were completed, American nuclear scientists began to devise ways

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for the spread of nuclear weapons to be restricted or even eliminated. Proposals like the Acheson-Lilienthal and Baruch plans were fundamentally out of step with the politics of the post-World War II world, but they clearly indicated that American scientists and politicians were quick to recognize that the spread of nuclear weapons could be severely destabilizing and dangerous to the world. The Baruch plan offers a convenient point of origin for a consensual U.S. foreign policy position that every American president has shared for close to 35 years. Indeed, no American administration has even seriously questioned the wisdom of nuclear weapons nonproliferation.[1] This essay certainly has no intention of disputing that particular foreign policy bromide. The notion that nuclear weapons may, in fact, be a stabilizing feature has been advanced with a number of explanations—e.g., that the destructive power of nuclear weapons will deter them from ever being employed,[2] or that used strictly as a defensive system they would deter aggression[3]—but these arguments simply do not ring true. Even if the likelihood of war were reduced by the presence of nuclear weapons, the consequences of a nuclear conflict would vitiate these contentions. Nations, like people, seem ready to employ whatever assets are available; it is hardly a policy axiom, but supply does appear to create its own demand. That nuclear weapons have not been used since the destruction of Hiroshima and Nagasaki is fortunate but not entirely due to good fortune; statesmen do appear to recognize some level of nuclear firebreak. But one would be naive to ascribe this preclusion entirely to political-military caution or acumen; the postwar lack of explosive situations and threatening actions must also be credited. Furthermore, one would be negligent to trust the strength and stability of the nuclear threshold that has prevailed to date. To put it simply, conditions change and such mutabilities may undercut the validity of the nuclear weapons thresholds that have held until now.

The purpose of this paper, rather is, to question a second American assumption that currently characterizes the nonproliferation debate, namely, that civilian nuclear power facilities are a handmaiden to nuclear weapons. Many have argued that the easiest and—in light of normative international opprobrium accorded nuclear weapons—most "acceptable" means to develop nuclear weapons is to use a nuclear electricity-generating capacity as a front, especially given the laxness of the nationally and internationally imposed safeguards designed to prevent such a contingency. Wohlstetter flatly states that one "can measure the advance towards the ability to manufacture nuclear explosives implicit in recent civilian nuclear electric power programs."[4] The Carter Administration explicitly treated the "nuclear power leads to nuclear weapons" linkage as the fundamental assumption in its nonproliferation strategy.[5] The "evidence," proponents claim, is indisputable. Each of the members of the nuclear club has an indigenous nuclear power industry that contributed in important ways to developing its nuclear weaponry. India, they insist, would have had a much more difficult time developing its nuclear weapon capability without the Indian research and power reactors supplied by the United States and Canada, and might not even have made the nuclear weapons commitments if it had lacked the civil research assistance.[6] But this relationship is much less than evident or self-supporting. A close examination of the evidence will present other hypotheses which cast a much different light on the issue of nuclear nonproliferation and American strategies toward that goal.

For example, it may be that the United States is posing a nonproliferation chimera by linking nuclear-generated electricity to nuclear weapons. By forging that linkage as the linchpin of American nonproliferation policy, the United States has been forced to assume a number of postures which have done little to staunch the dissemination of nuclear power and much to antagonize American allies and uncommitted nations. In addition, the less than evenhanded application of U.S. nonproliferation policies (i.e., the approval of reprocessing facilities for the Japanese but not for the South Koreans) has exacerbated this condition. If this nexus is not as direct as one might believe, then American allies and other countries have been needlessly antagonized or, at best, been subjected to undue pressure for only marginal returns. Finally, if one can argue that the nuclear power/nuclear weapons relationship is less certain than has been claimed, one can then ask what policies the U.S. government might consider that would throw out the offending foundling (in this case, nuclear weapons) without sacrificing its putative parents (the possible benefits of nuclear power).[7]

II. Nuclear Power and Nuclear Weapons: The Empirical Nexus

The close technical connection between the development of nuclear civilian power facilities and nuclear weapons was recognized early in the atomic era. The benefits of the former were widely espoused to compensate for the latter's horrors. Unfortunately, the two were seen to overlap. Robert Oppenheimer described the "heart of the problem" of international control as "the close technical parallelism and interrelation of the peaceful and the military applications of atomic energy."[8] The U.S. Acheson-Lilienthal Plan proposed to decouple this link by "denaturizing" plutonium, which would effectively make it unsuitable for weapons applications. However, the technical feasibility of this approach was not demonstrated. The Baruch Plan would have internationalized nuclear materials but, for a number of political reasons, this plan was unacceptable to the international community. The United States Congress passed the Atomic Energy Act (1946) as a unilateral means of preventing the spread of nuclear technology, especially weapons. Its success has been questioned; five nations—the Soviet Union, the United Kingdom, France, the People's Republic of China, and India—have tested nuclear explosive devices since then, and a number of other nations are thought to have nuclear weapons assembled but not yet tested (e.g., Israel and South Africa).[9]

This paper does not attempt to ask which nations have or will soon obtain nuclear weapons. Rather, it addresses the assumed connection between a nuclear electricity-generating capacity and a nuclear weapons capability. In this connection, the "facts" are much less obvious for three principal reasons. First, although it is clear that each nation which has exploded a nuclear device has sizable nuclear research and electricity-generating capacity, it should be just as clear that almost forty other nations possess nuclear power or research facilities (either operating, under construction, or planned) and have *not* developed nuclear weapons.[10]

The prime example of a nation which has developed an extensive nuclear industry without building nuclear weapons is Canada. The Canadian nuclear industry was established during its wartime weapons research experience. As part of the 1943 Quebec Agreements, Canadian nuclear researchers explored the weapons potential of "heavy water" in conjunction with American, British, and French scientists.[11] After the termination of hostilities, the Canadian government consciously rejected the continuation of nuclear weapons research and devoted the expertise gained from the wartime efforts to the development of a heavy water-based nuclear power reactor system.[12] In addition to Canada, there are a number of other industrialized nations with extensive defense establishments, all of which possess the technical competence to develop nuclear weapons. Switzerland, West Germany, and Sweden, in fact, "currently have a larger percentage of their generating capacity provided by nuclear power than does the United States" or any other of the nuclear weapons states.[13] Yet each of these nations has eschewed the development of nuclear weapons for a variety of reasons often peculiar to each country. In one of their few areas of agreement, Wohlstetter and Walske concur that "political will is the key, rather than mere competence."[14] Put more explicitly, "If [technical] capability itself were the driving force behind proliferation, Germany, Japan, Italy, the Netherlands, Belgium, and Sweden would have acquired nuclear weapons long ago."[15] But obviously this is not the case. One can, therefore, say with some confidence that the presence of a nuclear power capability might be a necessary condition for the development of nuclear weapons, but it is *not* a necessary *and* sufficient condition. There is little reason, then, to assume that the presence of nuclear power or research facilities is a precursor of a nuclear weapons capability.

A second reason for questioning conventional wisdom is the simple historical record: states that have developed nuclear weapons have been quite straightforward in their development programs. In many cases, their nuclear power R&D programs were tangential to their weapons programs and little subterfuge was practiced. Indeed, the "supply-push" theory of weapons nuclear development—that is, weapons technology is a reatively easy spin-off from the civilian nuclear technology[16]—was plainly reversed in the case of most of the nuclear weapons powers.

Military research clearly dictated civilian nuclear R&D in the United States, the Soviet Union, the United Kingdom, and (to a large extent) France.The United States is the clearest example; the Shippingport demonstration nuclear power reactor was based on, and an enlargement of, the Navy's nuclear submarine propulsion unit.[17] The early British reactor decisions were predicated upon the need to produce weapons-grade fissile materials. In September 1945, Sir James Chadwick (then Chairman of the subcommittee on atomic energy of the Government's Advisory Council on Scientific Policy) wrote that "the military applications of atomic energy obviously made a product plant 'of our own' essential for the defense of the United Kingdom and the Commonwealth. I believe there can be only one opinion on this question."

Foreign Minister Ernest Bevin seconded this sentiment in a characteristically more terse, albeit colloquial manner: "Let's forget about the Baroosh [the American-proposed Baruch plan] and get on with making the fissile."[18]

The French nuclear development case is more subtle. The postwar French government explicitly rejected nuclear weapons development in a speech by the French representative to the United Nations in June 1946: "I am authorized to say that the goals the French Government has assigned to the research of its scientists and technicians are purely peaceful."[19] Yet the first major decision of the French atomic energy commission was to build a plutonium-producing reactor.[20] As Scheinman points out, the "material and technical situation in France in 1946 substantially narrowed the range of policy alternatives available in atomic development."[21] However, he continues, "at the time, the only proven use of plutonium was for military purposes. This would seem to support the contention that the Five-year Plan had other than peaceful ends in view."[22] Bertrand Goldschmidt, who was the leading French authority on the production of plutonium, later noted that "the 1952 five-year plan made no mention of the possible use of plutonium in military applications, but it is certain that this eventuality was present—if not predominant—in the minds of those who suggested the five-year plan and encouraged its adoption."[23] By 1954, the military orientation of the French nuclear development program was dominant; the French power reactor program was of secondary importance. Again, the weapons tail was wagging the nuclear industry dog.

The Soviet nuclear decision-making calculus is less certain because of the lack of information available about Soviet nuclear institutions and research. However, since the Soviets detonated a nuclear device a full five years before their 5 MW(e) prototype power reactor at Obninsk became operational, it is probably safe to speculate that the Russian crash program to develop nuclear weapons in the late 1940s almost certainly preempted reactor research resources.[24]

The case of India is even less clear-cut. By the late 1940s, Indian officials had established a long-range plan calling for Indian "technological autarky in all phases of nuclear-related activities." By 1958, Indian atomic energy officials were declaring their capability to assemble nuclear explosives within 18 months after the weapons decision was made.[25] In May 1974, India became the sixth member of the nuclear club, that is, almost twenty years after she declared that she possessed the capability to build nuclear explosives. Although the details of India's nuclear program are somewhat obscured,[26] one is probably safe in saying that India's decision to build a nuclear device came in the early 1970s, that some of the materials and technology were acquired through the Canadian nuclear research reactor program, and that a nuclear device could have been assembled much earlier had the Indian government so desired. For our immediate purposes, the key point is that India did not need its civilian power reactor development program to accumulate a threshold of technical knowledge and radioactive materials before her nuclear technicians built the Indian bomb. Her nuclear weapons capability existed well before the early 1970s. The decision to build the bomb was largely made independent of the civilian reactor program, even though the expertise gained in the latter assuredly aided in implementing the decision. A plausible argument can be made that India had nuclear weapons intentions from the early days of its nuclear program. As such, the weapons intent at least partially motivated the Indian research and power reactor R&D programs, rather than the converse. Still, as noted above, the Indian case is ambiguous and probably comes closer to the "supply-push" paradigm than any of the other nuclear weapons development cases. The fact that India has not exploded a second nuclear device further clouds the insights that might be gained from this particular national experience.[27]

In brief, if we examine the nations that have chosen to exercise the nuclear weapons option, we find that they do not fit the "supply-push" model, that in most cases the alleged spillover was in the opposite direction with military or weapons R&D dictating the course of the civilian reactor development programs. Rather, a "demand-pull" syndrome was more in evidence. Consequently, the causal linkage and the direction between nuclear power reactor and nuclear weapons R&D programs appear much more tenuous. This is not to claim that nuclear reactor research was not useful in aiding nuclear weapons development; if nothing else, the training of personnel was an important advantage and the possible obscuring of the weapons applications might have been a useful diversion for both domestic and international consumption. Still, the available empirical evidence suggests that the decision to construct nuclear weapons was made for specific political and strategic reasons and that the presence of a civilian nuclear industry was not an important stimulus to, or had little bearing on, that decision.

There is yet a third reason why one can dispute the supposed causal relationship between the proliferation of nuclear power and nuclear weapons. Even if one accepts the causality as a working hypothesis, there are at least three strong and pressing reasons for nations not to travel the route leading from nuclear power to nuclear weapons. First, given that the proliferation of nuclear weapons has been condemned by most of the major nuclear suppliers, if a well-worn path leading to nuclear weapons from nuclear reactors were shown to exist, then the supplier nations—either individually or collectively—would be far more motivated to bar all nuclear technology sales to foreign nations unless the strictest possible safeguards were designed and implemented. This would effectively preclude the sale of nuclear energy technologies to lesser developed nations, and this could have damaging economic effects on both the supplying and consuming nations. Already Mason Willrich has called for a total ban on reactor exports to South Africa and David Lilienthal called for a complete moratorium on nuclear technology exports. Many of the nations just beginning to acquire nuclear research and power facilities openly wonder if the London Suppliers Group and the International Nuclear Fuel Cycle Evaluation (INFCE) group are not the forerunners of such a preclusionary consortium.[28]

Any nation considering the possible economic or political benefits of a nuclear energy that is dependent on imported technology and materials, would be hesitant to endanger these benefits by developing nuclear weapons. The Indian case, although somewhat speculative, provides an illustrative example. The abrogation of Canada's nuclear assistance programs to India was a direct result of the Indian "peaceful nuclear explosive" (PNE).[29] The somewhat delayed and ambiguous U.S. response ultimately resulted in increased Congressional restrictions on U.S. nuclear exports as manifested in the Nuclear Nonproliferation Act of 1978[30] and the Administration's formation of the London Suppliers Group (February 1975) and INFCE group. Although the forcefulness and effectiveness of these measures has been questioned,[31] India has not exploded a second PNE, and her "nuclear weapons program has been shelved."[32] Indeed, the then Indian Prime Minister Desai publicly stated, "We will keep [India's atomic reactors], but they will never be used for atomic bombs."[33]

Almost certainly there are domestic, military, and political reasons behind India's decision not to test another nuclear device (e.g., some reports claim that the military argued against a continued nuclear weapons development program because it would deprive the military of funds it preferred to spend on conventional weapons).[34] Still, one can plausibly argue that the Indian government was at least partially deterred from continued nuclear weapons development, however peacefully couched, by the Canadian, U.S., and world reaction to the Indian nuclear test.[35] As such, the government chose the clear and more tangible benefits of peaceful nuclear energy in cooperation with its nuclear suppliers rather than the more ambivalent benefits of nuclear weapons. Perhaps if India (or any other nation) achieved nuclear technology and materials independence, this obstacle to nuclear weapons might diminish, but for the present it does appear to be a partial deterrent against transferring India's peaceful nuclear resources into the weapons area.

Reports of a nuclear explosion somewhere in the vicinity of South Africa touched off another debate as to the possibility that South Africa might be the seventh nuclear power.[36] However circumspect the South African government might be in definitively abjuring nuclear weapons, there are important political and military reasons that have encouraged and apparently still encourage it not to build and test nuclear weapons.[37] West Germany, which has possessed the technical capability to build a nuclear weapons device and certainly could claim the military *raison d'être* to do so, has also chosen not to become a member of the nuclear club; no less an observer than Henry Kissinger stated years ago that West Germany's decision to develop nuclear weapons would have a profoundly destabilizing effect on the European political arena and would almost surely provoke Soviet military intervention.[38]

Even though these are specific nations, each manifesting its own particular reasons for not developing nuclear weaponry, their reluctance is not the result of isolated political decisions. Richard Betts carefully compares the possible nuclear motives of many potential nuclear weapons states and offers generalizable reasons why "paranoids, pygmies, and pariahs" have rejected and should continue to reject the nuclear weapons option.[39] Of course, states need not accept the arguments of Betts and others as to why the proliferation of nuclear weapons is necessarily bad or evil, but the record unequivocally shows that for whatever reasons, the vast majority of nation-states have chosen not to build nuclear weapons. The predictions of proliferation Cassandras have been markedly exaggerated, if not plainly wrong.

The argument is often cited that nuclear weapons might be easier to produce because the exposure to atomic research and materials provided by nuclear power makes nuclear weapons technology somewhat more available. In Wohlstetter's words:

> . . . civilian nuclear energy programs now under way assure that many new countries will have traveled a long distance down the path leading to a nuclear weapons capability. The distance remaining will be shorter, less arduous, and much more rapidly covered. It need take only a smaller impulse to carry them the rest of the way. There is a kind of Damoclean overhang of countries increasingly near the edge of making bombs.[40]

However, it is unclear that non-nuclear states will take that last and imperative step from nuclear power facilities to nuclear weapons capability. Even if the potential is present, one still needs to assess the political costs and advantages to be gained by "going nuclear."[41] The estimation of the potential threat of nuclear war might suggest a terrible eventuality, and most defense analysts will claim that one needs to base contingency plans on something as substantive as technical capabilities. Still, political inhibitions against the development of nuclear weapons which were valid five, ten, and fifteen years ago appear to be just as relevant today, and might prove the present-day proliferation soothsayers just as wrong as the earlier atomic augurs. More basically, if one moves away from projections and scenarios, the linkage between nuclear capability and weapons reality is not only unclear, but basically unproven. Wohlstetter and others who decry nuclear weapons proliferation via the nuclear power freeway must assume the burden of proof and demonstrate that such a route is travelled.[42]

There appears, then, to be ample reasons to question the accepted policy assumption that nuclear power facilities will lead directly—even readily—to nuclear weapons. The evidence drawn from the nations that have the technical capability compared to those that have developed nuclear weapons plainly does not substantiate the linkage argument. If this assumed linkage is not as certain or direct as it might appear, then one can reasonably ask what changes should be recommended for U.S. nuclear weapons nonproliferation policy, given that this assumption is central to both Congressional and Administrative nonproliferation policy. It is to this issue that we now turn.

III. Conclusions and Implications

At the outset, it was emphasized that the purpose of this paper was not to question the desirability of the proliferation of nuclear weapons, but rather the assumption that the possession of nuclear research or power facilities inevitably results in nuclear weapons or motivates their acquisition. The following conclusions and implications are based on the understanding that peaceful nuclear activities do not, in fact, lead to nuclear explosives, and it is therefore possible to encourage the former without necessarily risking the latter. The dissemination of nuclear facilities while discouraging nuclear weapons is, however, a complex phenomenon that calls for a number of highly interactive policy considerations which need to be attended to and pursued simultaneously. Technical issues, although perhaps not as imperative as political requirements, must be addressed. Above all, as Betts points out, these problems deal with multiple national actors, objectives, and conditions; hence, "There are no simple solutions that are feasible, no feasible solutions that are simple, and no solutions at all that are applicable across the board."[43]

The nonproliferation policies of the Carter Administration added a necessary sophistication to the overall understanding of nonproliferation and its features. In particular, it emphasized that there are multiple facets to the issue and identified six elements for special attention: (1) better safeguards for transferred nuclear technology and materials; (2) restrictions on the transfer of sensitive technologies; (3) creation of nonproliferation incentives; (4) building international consensus through cooperative studies regarding the potential problems in the nuclear fuel cycle; (5) making U.S. domestic nuclear policy consistent with stated U.S. international objectives; and (6) reducing any security or prestige motives to develop nuclear explosives.[44] Although one may question the Carter Administration's constancy in implementing its nonproliferation policies, one must award it great credit for attempting to understand the problem in all its complexities and achieving a certain amount of success (e.g., curtailing the expansion of reprocessing facilities planned for South Korea and Pakistan).[45] Even if the London Suppliers and INFCE groups did not completely subscribe to President Carter's admonitions or projections, some important concessions were gained and, apparently, the groundwork was laid for further negotiations.[46] Against these credits, the Carter nonproliferation account must be debited for its policies in regard to South Korea and Taiwan. Both the plan to withdraw U.S. troops from South Korea and the decision to recognize the PRC implied a reduction of military support, a step which could impel the ROK and the ROC to seek their security in an independent nuclear capability. Moreover, such actions have ramifications not limited to the countries involved, but serve as object lessons for other American allies, e.g., Japan. The net effect, therefore, has been to send contradictory signals that obscure the U.S. nonproliferation position in the eyes of the world.

Ideally, U.S. nuclear weapons proliferation policy should permit the expansion of peacetime uses of nuclear energy while simultaneously providing incentives not to develop nuclear weapons; more specifically, it should offer nuclear facilities which provide minimal technical opportunity to develop covert nuclear weapons programs and at the same time political-military conditions not giving rise to technical opportunities that may be seized upon as possible nuclear weapons rationales. Simple enough in principle, but these twin goals lead to serious dilemmas.

Three current features of the international nuclear marketplace directly affect the design and implementation of these goals. First, due to the current doubts regarding nuclear energy (e.g., costs, safety), there is some time available to make studied decisions; in other words, the so-called "nuclear depression" delays any immediate necessity to take precipitant actions.[47] Second, the United States no longer is a solitary actor in the international nuclear marketplace.[48] Other nations have important political and economic interests in exporting nuclear technology and materials, interests which U.S. policymakers cannot simply dismiss. Hence, any efforts to restrict the flow of nuclear knowledge, technology, or materials must be cooperative if they are to succeed. Finally, nations which are the object of proliferation fears have legitimate security and economic concerns that cannot be willed away by general statements of American intent, no matter how well motivated. Energy self-sufficiency is a critical concern to the developing nations, one that cannot be resolved by a simple recitation of the potential proliferation dangers of enrichment or reprocessing facilities.[49]

Given these restraints, the twin cornerstones of U.S. nuclear nonproliferation policy must be to satisfy the economic energy needs of the potential N + 1 nations while alleviating the security fears which might otherwise drive them to turn peaceful nuclear technology into instruments of war. There is increasing evidence that the hopes of the nonnuclear energy advocates—that nonnuclear alternatives (such as solar energy technologies) will be able to meet the forecast energy requirements—will not be fulfilled.[50] A recent National Academy of Sciences study went so far as to recommend the continued U.S. development of breeder reactor technology, even in light of the greater potential it presents in terms of the proliferation of nuclear weapons materials.[51] For these reasons, U.S. policymakers should realistically assume that other nations will look to nuclear power as an economic energy alternative. For the United States to embargo the export of all nuclear technologies would not only fail to halt the spread of nuclear technology, because other supplier nations could and would readily fill the technology and materials gaps, but it would almost certainly be counterproductive. Embargoed nations would strive to develop indigenous nuclear capabilities which would be completely free from restrictions or safeguards that the United States might be able to impose were it supplying the nuclear materials. Furthermore, as Betts argues, "Embargoing nuclear energy technology is a bald exercise in realpolitik, making American pretensions to supporting equity for the Third World seem disingenuous."[52]

If we can assume, then, that nuclear technologies will be export commodities, the question becomes one of which technologies are the most suitable for peacetime power applications and least amenable to weapons applications. In these terms, the Carter Administration was discerning enough to recognize that normal operations of the light water reactor (LWR) do not readily lend themselves to the diversion of radioactive materials that can be used to manufacture nuclear explosives. This is not to say that LWRs cannot be used to such ends, just that they are much less susceptible to strategic materials diversion tactics than other reactor types, such as the heavy water or breeder reactors.[53] The critical nuclear materials necessary for weapons construction are much more readily obtained in the other areas of the nuclear fuel cycle, specifically the "front end" (uranium enrichment) and the "back end" (reprocessing for plutonium). Both the front and back ends of the nuclear fuel cycle can provide fissile, weapons-grade materials. The policy conclusion here is clear: export restrictions should be placed less on the LWR and more on the enrichment and reprocessing (or plutonium separation) technologies. To a large degree, this was a keystone of the Carter Administration's nonproliferation policy.[54]

There is a second facet to this policy, that of guaranteeing other nations sufficient access to energy sources to satisfy their indigenous needs. If, for political or economic reasons, a developing nation chooses nuclear power sources, it needs to have some confidence that it can obtain slightly enriched uranium to fuel its reactors (assuming they are LWRs). Lacking this confidence, it would understandably (and even legitimately under the terms of the Nonproliferation Treaty) want to develop either (or both) of the remaining portions of the nuclear fuel cycle. The United States, then, must somehow act to assure the developing nation that it will have a guaranteed supply of reactor fuel, either in terms of a bilateral agreement or possibly through a multinational nuclear fuel suppliers' facility.[55] The international shortfall in American enriched uranium supplies due to the Nixon Administration's curtailment policies in the early 1970s tended to undermine U.S. guarantees regarding enriched reactor fuel. Such mistakes cannot be permitted to recur. Similarly, the willingness of the Arab nations to impose economic sanctions on vital energy supplies for strictly political reasons and President Carter's 1979 decision to freeze Iranian assets, again for purely political motives, set possible precedents which are hardly reassuring to potential nuclear reactor customers.

This problem becomes even more acute should many nations decide that breeder reactors and a plutonium economy are the critical elements in their energy futures, for plutonium is readily convertible into a weapons application. Should the United States process and export plutonium to meet those demands as a means of controlling the supply of plutonium and the reprocessing technology? Fortunately, some time remains before that particular dilemma must be resolved. In the interim, the U.S. government should strive to convince possible nuclear reactor customers that should they decide to establish a nuclear power system, the LWR technology is the most appropriate, both now and in the future, and that adequate fuel sources are assured. At the same time, the U.S. nuclear research community should abandon its resistance to breeder reactor research explicitly accompanied by research on safeguarding the plutonium.[56] Since the United States is no longer alone in the atomic technology research world, these efforts would have to be coordinated with the other industrialized nations. Admittedly this is no easy task, but given the fragmented nature of the international nuclear industry, there is no alternative.

This paper cannot conclusively demonstrate that a nuclear research or power industry in no way facilitates a decision to develop nuclear weapons. If a nation were to decide to manufacture nuclear weapons, however, it would be a decision based more on political and military criteria than the simple convenience of an atomic reactor. Therefore, the second key to American nuclear weapons; nonproliferation policy must be to reduce the political and military tensions that might drive a nation to become a nuclear weapons power. This might be—and has been—done in a number of ways. In the case of South Korea, it was accomplished by the renewed American promise not to withdraw any more combat troops; indeed, the threat of withdrawing U.S. troops was also used to dissuade the South Korean government from its plans to acquire reprocessing technology from France. To reassure what some call the "paranoid" states, the U.S. government must confront the "dove's dilemma" and sell advanced conventional arms to potential nuclear weapons states as an alternative means of defense. Such a policy could well fly in the face of conventional arms control wisdom, but the tradeoff is necessary if one is serious about reducing other nations' incentives to acquire nuclear weapons as defensive deterrence systems. Some have argued that a "nuclear guarantee," possibly signed by both the United States and the Soviet Union, would be an effective means of preventing nations from acquiring their own nuclear arsenal. Under the terms of such an agreement, the United States or the Soviet Union would be obligated to respond to any nuclear attack on a nonnuclear nation with a nuclear retaliatory strike. However theoretically correct such a posture might be, its political and operational liabilities render its value highly questionable and, therefore, almost certain not to meet the security needs of the nuclearly-threatened nations. Finally, the U.S. requirement to reduce the nuclear weapons security incentive of other nations might have to assume a formal alliance posture in some cases. Although this might rankle the sensibilities of some neo-isolationists (and others with more specific concerns), no one has suggested that the choices would be easy. If, in the overall context of U.S. foreign policy, nuclear weapons nonproliferation becomes imperative, then the issue of formal alliances must be considered.

The political incentives issue (what Wohlstetter calls the "demand side" of the argument)[57] is particularly thorny, for different nations present strikingly different conditions which require, in turn, different political postures. Assuaging Argentine fears of possible Brazilian expansion calls for a set of military, political, or economic incentives (or disincentives) different than those needed to persuade South Africa not to become the seventh nuclear weapons power. On the surface, this may appear to be an inequitable approach, as the United States allies with one nation to ensure its security while warning another that its development of nuclear weapons may undermine American guarantees.[58] Consequently, U.S. policymakers need to develop and enunciate a clear and consistent statement of American goals and priorities defining how they are to be translated into policy practice to replace the inconsistent, at times contradictory, policies that presently characterize the American position.[59] Wohlstetter poses an adequate warning: "The principal precondition for us to influence other suppliers as well as importers is a clear, consistent policy, a set of signals which are green on some activities, red on others. We now flash red, yellow, and green on practically everything."[60] It is perhaps instructive that Soviet nonproliferation policy, largely based on its experience in supplying India, permits few such ambiguities.[61]

In summary, the key policy considerations presented here are derived from the recognition that nuclear research or power facilities should not be treated as an indication that a nation has the intention of developing a nuclear weapons capability. The United States, in conjunction with the other major nuclear industrial nations, can afford to permit the export of nuclear reactor technology and materials without excessive fear of proliferating nuclear weapons. This realization will reduce the perceptions of the lesser developed nations that they are victims of technological discrimination and must exist on the short end of the energy stick. At the same time, the United States must work to restrict the distribution of weapons-grade fissile materials and the technologies which make these materials available (i.e., enrichment and reprocessing). U.S. international cooperation with the so-called second and third tier supplier nations, such as those represented in some of the INFCE working groups, is a necessary and desirable feature, as would be the willingness of the United States to amend its positions as political and technological conditions are proven altered (e.g., if a means for "denaturizing" plutonium becomes technically feasible).

At the same time, the United States and its allies need to offer some assurances that the political and military incentives that have, to date, restricted the membership in the nuclear weapons club continue to remain valid in the future. As noted above, this presents a series of difficult choices in the overall context of U.S. foreign policy, but difficult is not a synonym for impossible or unimportant. These incentives need to satisfy the paranoid, the pygmy, and the pariah nations, but they cannot be met by the implicit neglect of U.S. foreign policy goals. For the United States to be seemingly arbitrary (as in the cases of Korea and Japan) or lacking clear direction (as the debates over selling fuel to India or reactors to Brazil would apparently indicate) would leave as much a sense of confusion as currently prevails and presage the ultimate (or continued, say some critics) failure of U.S. nuclear weapons nonproliferation policy. It is little wonder that U.S. allies, such as France, Germany, and even Italy, find scant reason to support U.S. policy, for it can scarcely be identified. Therefore, it is appropriate to repeat the need for a clear statement of U.S. nonproliferation goals placed in the framework of U.S. foreign policy objectives, defining how those goals are translated into practice and the means by which specific national assistance programs will be determined.

None of these conclusions represent easy "solutions" or specific policy recommendations. The purpose of this paper was more to suggest that a basic assumption of American nonproliferation policy—the linkage between nuclear power and nuclear weapons—was more apparent than real, that is, the basic assumptions failed to correspond to the historical record. Lacking that correspondence, future nonproliferation policy could be as confused or even counterproductive as past policies. Certain policy implications which call for critical adjustments in U.S. nuclear proliferation policy do arise from such an altered perception. That none of the conclusions provide easy answers should not be unexpected, but neither should it be unexpected that the consequences of ignoring the problems or wishing them away could be disastrous in terms of the stability of the international arena. Few would argue that point. The United States and the international community currently have been granted some time to devise and implement appropriate nuclear nonproliferation policies. To base those policies on an inaccurate reading of the putative dangers of nuclear-generated electric power would not only ignore the evidence, but would also be a grievous waste of the time which is now available to us.

Notes

1. The Carter Administration was certainly no exception; see Joseph S. Nye, "Nonproliferation: A Long-Term Strategy," *Foreign Affairs*, Vol. 56, No. 3 (April 1978), pp. 601–624.

2. The classic statement of this view is Albert Wohlstetter, "The Delicate Balance of Terror," *Foreign Affairs*, Vol. 37, No. 2 (January 1959), pp. 211–234.

3. See, for example, R. Robert Sandoval, "Consider the Porcupine: Another View of Nuclear Proliferation," reprinted in John E. Endicott and Roy W. Stafford, Jr., eds., *American Defense Policy* (Baltimore: The Johns Hopkins University Press, 1977 edition), pp. 125–126.

4. Albert Wohlstetter, "Spreading the Bomb Without Quite Breaking the Rules," *Foreign Policy*, No. 25 (Winter 1976–77), pp. 150–151. For a lengthier version of the Wohlstetter theses, see Albert Wohlstetter et al., *Swords from Plowshares: The Military Potential of Civilian Nuclear Energy* (Chicago: University of Chicago Press, 1979). Wohlstetter, of course, questions the efficacy of such safeguards.

5. See Richard Burt, "Concern Increasing on A-Bomb's Spread," *New York Times*, April 7, 1980, pp. A–1, A–4, or Department of Energy, *Nuclear Proliferation and Civilian Nuclear Power* (Washington, D.C.: U.S. Department of Energy, DOE/NE-0001, December 1979), either "Executive Summary" or Vol. 1: "Program Summary."

6. Robert Gillette, "India: Into the Nuclear Club on Canada's Shoulders," *Science*, Vol. 184, No. 4141 (June 7, 1974), pp. 1053–1055; also Onkar Marwah, "India's Nuclear and Space Program: Intent and Policy," *International Security*, Vol. 2, No. 2 (Fall 1977), pp. 96–121.

7. This essay does not consider the current debate over the costs and benefits of nuclear power, an issue marked by more dissent and emotion than agreement. For the present purposes, nuclear power is treated as an effective and economic means to generate electricity and, as such, a desired technology in both the developing and the industrialized nations.

8. Quoted in Wohlstetter, "Spreading the Bomb," p. 93.

9. It is possible to increase the number of the N+1 club by including a small number of supposed "closet" members, namely nations who are thought to have nuclear weapons but who, for a number of reasons, have chosen not to make their possession public. Such nations might include the aforementioned Israel, South Africa, and, less likely, Pakistan and South Korea. However, this paper has dealt solely with the demonstrated public record and therefore does not include these as nuclear weapons states. The Ford Foundation nuclear energy policy study group operated under the same working premise; see

Spurgeon M. Keeny, chairman, et al., *Nuclear Power Issues and Choices* (Cambridge, Mass.: Ballinger, 1977).

10. Carl Walsk, "Nuclear Electric Power and the Proliferation of Nuclear Weapons States," *International Security*, Vol. 1, No. 3 (Winter 1977), p. 97.

11. See Wilfred Eggleston, *Canada's Nuclear Story* (Toronto: Clarke, Irwin, and Co., 1965), for details.

12. For an explanation of this decision, see Leonard Beaton and John Maddox, *The Spread of Nuclear Weapons* (London: Chatto and Windus for the International Institute for Strategic Studies, 1962), Chap. 5, "Canada."

13. Walsk, "Nuclear Electric Power," p. 96. Walsk, President of the Atomic Industrial Forum, is admittedly a vested interest.

14. The quote is from Wohlstetter, "Spreading the Bomb," p. 148; cf. Walsk, "Nuclear Electric Power," p. 94.

15. Richard K. Betts, "Paranoids, Pygmies, Pariahs, and Nonproliferation," *Foreign Policy*, No. 26 (Spring 1977), p. 163.

16. The contrast is made between "the 'demand-pull' of nations facing serious national security threats (and thus going out of their way to acquire nuclear weapons)" and "the 'supply-push' of nations simply finding nuclear weapons too easy to acquire ('too sweet') as a spinoff from genuinely civilian nuclear industry." George H. Quester, "Nuclear Proliferation: Linkages and Solutions," *International Organization*, Vol. 33, No. 4 (Autumn 1979), p. 543.

17. Richard G. Hewlett and Francis Duncan, *Nuclear Navy 1947–1962* (Chicago: University of Chicago Press, 1974).

18. Both quotations from Margaret Gowing, *Independence and Deterrence: Britain and Atomic Energy 1945–1952* (New York: St. Martin's Press, 1967), Vol. 1, p. 164.

19. Quoted in Lawrence Scheinman, *Atomic Energy in France Under the Fourth Republic* (Princeton, N.J.: Princeton University Press, 1965), p. 20.

20. Francois Perrin, "Atomic Energy in France," *Bulletin of the Atomic Scientists*, Vol. 11, No. 3 (March 1955).

21. Scheinman, *Atomic Energy in France*, p. 20.

22. Ibid., p. 88.

23. Bertrand Goldschmidt, "The French Atomic Energy Program," *Bulletin of the Atomic Scientists*, Vol. 18, No. 7 (September 1962), p. 40.

24. A. Petrosyants, "Nuclear Energy—A Productive Force," *New Times*, Vol. 11 (1971), p. 18; also see Arnold Kramish, *Atomic Energy in the Soviet Union* (Palo Alto, Calif.: Stanford University Press, 1959).

25. Marwah, "India's Nuclear and Space Programs," p. 98.

26. See George Bindon and Sitoo Mukerji, "Canadian-Indian Nuclear Cooperation," *Research Policy*, Vol. 7, No. 3 (July 1978), pp. 220–238, and

R. W. Morrison and E. G. Wonder, "Canadian-Indian Nuclear Cooperation: A Rebuttal," *Research Policy*, Vol. 8, No. 2 (April 1979), pp. 187–190.

27. Lewis A. Dunn, "Half Past India's Bang," *Foreign Policy*, No. 36 (Fall 1979), pp. 71–88.

28. Steven J. Warnecke, "Non-Proliferation and INFCE: An Interim Assessment," *Survival*, Vol. 21, No. 3 (May/June 1979), pp. 116–125, and Eliot Marshall, "INFCE: Little Progress in Controlling Nuclear Proliferation," *Science*, Vol. 207, No. 4438 (March 28, 1980), pp. 1446–1447.

29. Gillette, "India: Into the Nuclear Club on Canada's Shoulders."

30. Public Law 95-242 is described by Frederick Williams, "The United States Congress and Nonproliferation," *International Security*, Vol. 3, No. 2 (Fall 1978), pp. 45–50.

31. Most noted by Wohlstetter, "Spreading the Bomb."

32. Dunn, "Half Past India's Bang," p. 71; of course his assessment may have to be revised with the reelection of Prime Minister Gandhi.

33. *Time* magazine, April 4, 1977, p. 36; quoted in Marwah, "India's Nuclear and Space Programs," p. 120.

34. This argument is cited in Betts, "Paranoids, Pygmies, Pariahs," p. 160, and effectively demolished by Marwah, "India's Nuclear and Space Programs."

35. The Carter Administration decision to sell enriched uranium to India despite India's continued refusal to agree to nuclear controls seriously undermines the use of supply sanctions as a means of limiting possible proliferation. Richard Burt, "U.S. Decides to Send Atom Fuel to India," *New York Times*, May 8, 1980, pp. A–1, A–6.

36. For reports and speculation on the observed flash of light, see David Bulter, "A Flash of Light," *Newsweek* (November 5, 1979), pp. 64–65; Eliot Marshall, "Flash Not Missed by Vela Still Veiled in Mist," *Science*, Vol. 206, No. 4422 (November 30, 1979), pp. 1051–1052; and Thomas O'Toole, "Radar Hinted Africa A–Blast," *Washington Post*, January 14, 1980, p. A6. Even after a careful sifting of the evidence, the cause of the Vela observation remains unclear; see Richard Burt, "Reports of A-Blast Still Unconfirmed," *New York Times*, January 21, 1980, p. D–23; Eliot Marshall, "Scientists Fail to Solve Vela Mystery," *Science*, Vol. 207, No. 4430 (February 2, 1980), pp. 504–506; and Eliot Marshall, "Navy Lab Concludes Vela Saw a Bomb," *Science*, Vol. 209, No. 4460 (August 29, 1980), pp. 996–997.

37. These arguments are persuasively presented by Richard K. Betts, "A Diplomatic Bomb for South Africa?" *International Security*, Vol. 4, No. 2 (Fall 1979), pp. 91–115; Betts's article was written before the Vela observation controversy alluded to above (fn. 35).

38. Henry A. Kissinger, *The Troubled Partnership* (New York: McGraw-

Hill for the Council on Foreign Relations, 1965); for a more detailed discussion, see Beaton and Maddox, *The Spread of Nuclear Weapons*, Chap. 6 "Germany."

39. Betts, "Paranoids, Pygmies, Pariahs."

40. Wohlstetter, "Spreading the Bomb," pp. 148–149.

41. See Betts, "Paranoids, Pygmies, Pariahs."

42. For instance, Ted Greenwood, Harold A. Feiveson, and Theodore B. Taylor, *Nuclear Proliferation: Motivations, Capabilities, and Strategies for Control*, and David C. Gompert et al., *Nuclear Weapons and World Politics: Alternatives for the Future* (both books, New York: McGraw-Hill for the Council on Foreign Relations, 1977).

43. Betts, "Paranoids, Pygmies, Pariahs," p. 178.

44. From Nye, "Nonproliferation: A Long-Term Strategy," p. 611.

45. See Michael Brenner, "Carter's Bungled Promises," *Foreign Policy*, No. 36 (Fall 1979), pp. 89–101. Brenner is rejoindered by Joseph S. Nye, "We Tried Harder (and Did More)," *Foreign Policy*, No. 36 (Fall 1979) pp. 101–104.

46. See Nye, ibid.; also Richard Burt, "66-Nation Study Predicting a Surge in Bomb-Grade Nuclear Materials," *New York Times*, November 4, 1979, Sect. I, pp. 1, 8.

47. Pierre Lellouche, "International Nuclear Politics," *Foreign Affairs*, Vol. 58, No. 2 (Winter 1979/80), pp. 336–350; also Quester, "Nuclear Nonproliferation," pp. 558–559.

48. See Paul L. Joskow, "The International Nuclear Industry Today: The End of the American Monopoly," *Foreign Affairs*, Vol. 54, No. 4 (July 1976), pp. 788–803, and Steven J. Baker, "Monopoly or Cartel?" *Foreign Policy*, No. 23 (Summer 1976), pp. 202–220. More recent evidence is Richard Burt, "U.S. Tries to Prevent Swiss Sale to Argentina for Atom Program," *New York Times*, March 11, 1980, p. A-8, and Richard Burt, "Iraq Said to Get A-Bomb Ability with Italy's Aid," *New York Times*, March 18, 1980, pp. A-1, A-8.

49. This was a driving consideration in the Brazilian decision to purchase nuclear technology from West Germany; see Normal Gall, "Atoms for Brazil, Dangers for All," *Foreign Policy*, No. 23 (Summer 1976), pp. 155–201. Also see Juan deOnis, "Argentina and the Bomb: It Has All the Pieces," *New York Times*, March 30, 1980, Section E, p. 5, who quotes an Argentine nuclear official: "We simply cannot let our future supply of electric power depend on decisions by others over what technology we should use, or what we do with our spent fuel."

50. This is still a contentious statement in the context of Third World nations; Wohlstetter ("Spreading the Bomb," p. 169) seems optimistic, but more in terms of affirmation than analysis. Denis Hayes, *Rays of Hope: The*

Transition to the Post-Petroleum World (New York: Norton, 1977), and Amory B. Lovins, *Soft Energy Paths: Towards a Durable Peace* (Cambridge, Mass.: Ballinger for Friends of the Earth, 1977) extol the nuclear nonproliferation advantages of solar energy technologies.

51. The National Academy of Sciences Committee on Nuclear and Alternative Energy Systems (CONAES) study is reported on by Luther J. Carter, "Academy Energy Report Stresses Conservation," *Science*, Vol. 207, No. 4429 (January 25, 1980), pp. 385–386, and Thomas O'Toole, "Energy Analysis Stresses Use of Coal, Atom Power," *Washington Post*, January 14, 1980, pp. A–1, A–11; also see Burt, "66-Nation Study," and Marshall, "INFCE," who report that the INFCE study will call for the development of breeder technology. Finally, see Sam H. Schurr et al., *Energy in America's Future* (Baltimore: The Johns Hopkins University Press for Resources for the Future, 1979).

52. Betts, "Paranoids, Pygmies, Pariahs," p. 172.

53. Wohlstetter, "Spreading the Bomb," pp. 158–159; Keeny et al., *Nuclear Power Issues and Choices*, p. 179. The materials for the Indian PNE were obtained from a research reactor rather than a power reactor.

54. Keeny et al., *Nuclear Power Issues and Choices*, comes to similar conclusions. Since seven of the participants in the Ford nuclear energy study later assumed positions in the Carter Administration, the areas of agreement, not surprisingly, are highly correlated.

55. For an example of the latter, see the discussions in Baker, "Monopoly or Cartel?" and Senator Abraham A. Ribicoff, "A Market-Sharing Approach to the World Nuclear Sales Problem," *Foreign Affairs*, Vol. 54, No. 4 (July 1976), pp. 763–787.

56. The Carter Administration's special ambassador was rumored to have proposed that the United States withdraw its opposition to breeder development programs, a position which caused great consternation within the Administration. R. Jeffrey Smith, "Nonproliferation Policy Challenged," *Science*, Vol. 208, No. 4443 (May 2, 1980), p. 478. See Paul Lewis, "66 Nations Urge Fast-Breeder Reactor," *New York Times*, March 1, 1980, pp. 27–28.

57. Wohlstetter, "Spreading the Bomb," p. 176.

58. Betts, "Paranoids, Pygmies, Pariahs," pp. 182–183, offers some examples of how U.S. nonproliferation policies could be applied to specific nations within the framework of a consistent set of goals.

59. Some possible bureaucratic reasons for these contradictions are suggested by Brenner, "Carter's Bungled Promises." Also see Smith, "Nonproliferation Policy Challenged."

60. Wohlstetter, "Spreading the Bomb," p. 167. One need not look far beyond the *New York Times*. For example: compare Richard Burt, "U.S.

Seeks to Widen Atom Export Curb," *New York Times*, April 3, 1980, p. A–9, with Burt, "U.S. Decides to Send Atom Fuel to India," or Anonymous, "Italy Says It Consulted U.S. on Nuclear Sale to Iraq," *New York Times*, March 20, 1980, p. A–4.

61. Gloria Duffy, "Soviet Nuclear Exports," *International Security*, Vol. 3, No. 1 (Spring 1978), pp. 83–111.

DEBATE PROPOSITION TWO

Resolved: That the United States Should Significantly Reduce its Commitment to NATO

The U.S. role in NATO and the security of Western Europe have been cornerstones of U.S. defense policy for many years. In recent years, however, a number of aspects of U.S. NATO policy have come to be debated, both within the United States and in the countries of Europe. The materials in this section give background information on the political and military aspects of the alliance, the evolution of current U.S. NATO policy, sources of tension and policy dispute, the relation between NATO nuclear weapons modernization and U.S.-Soviet strategic force structures, efforts to limit theater nuclear weapons, and the debate on what proportion of the allied effort should be borne by its members on each side of the Atlantic.

Current
Policy No. 350

The Alliance at a Crossroad

December 2, 1981

United States Department of State
Bureau of Public Affairs
Washington, D.C.

Following is an address by Richard Burt, Director of the Bureau of Politico-Military Affairs before the Friedrich Ebert Foundation in Bonn, West Germany, December 2, 1981.

Forty-eight hours ago the United States and the Soviet Union opened a new and important negotiation. A negotiation unlike any we or they have embarked upon before. As with SALT [Strategic Arms Limitation Talks], these talks are about nuclear weapons. But unlike SALT, the United States in this forum is seeking limits on weapons which cannot strike American territory. The Soviet Union, in this new forum, is seeking limits on prospective American weapons which are to be located outside the United States. Three decades of history have lead to this unique negotiation and to the unique structure for European security which it is designed to strengthen. To fully grasp the significance of this negotiation, and to evaluate its prospects, one must go back into that history.

Legacy of Postwar Era

Perhaps the central legacy of the postwar era is that in 1981—36 years after the conclusion of conflict in Europe—there remain here one-quarter of a million American troops. These American soldiers are still in Europe because the experience of the first half of this century convinced Americans that they would inevitably be drawn into any war in Europe and that they, therefore, should act to prevent such a war from erupting. These American soldiers are still welcomed in Europe because that same bitter experience has persuaded thoughtful Europeans that an equilibrium cannot be maintained on their continent without the engagement of American power.

To those who have lived through the postwar era, these truths seem self-evident. The present always appears the predestined result of an ineluctable past. In retrospect, the great landmarks of modern European history seem to march in one direction:

1949—The North Atlantic Treaty;
1951—The creation of NATO's integrated military command;
1955—The Federal Republic of Germany's entry into NATO;
1967—The creation of NATO's Nuclear Planning Group and NATO's adoption of the strategy of flexible response;
1979—NATO's decision to modernize its intermediate-range nuclear forces and to engage the Soviets in an effort to limit such systems;
1981—The opening of U.S.-Soviet negotiations of intermediate-range nuclear forces.

These moments were not, however, the products of blind historical forces. They were the work of men of vision. These dates are not signposts on a one-way street to the present. Rather they mark crossroads at which Western nations chose one path and rejected others. Today, we stand at another crossroad.

Today, men of vision must once again chart a course into the unknown, their only guide to the future an understanding of the past.

In fashioning the institutions and the doctrine upon which the defense of Europe now rests, the Western community of nations examined, pursued, and ultimately rejected other courses. As our peoples reexamine very similar alternatives today, it is worth recalling what was rejected in the past and why.

The defense of Europe today rests upon three pillars: collective security, nuclear deterrence and American engagement. When first propounded, each of these concepts was revolutionary. Today they are again controversial, not because they have failed but because they have succeeded so well. Although debate in Europe has focused on intermediate-range missiles, the effect has been to throw into question the much more fundamental underpinnings of Western security.

This debate is to be welcomed. The concepts upon which the West bases its security cannot retain their vitality if they are not challenged and revalidated by each successive generation. The institutions upon which the West depends for its defense cannot retain vitality if they are not forced to justify, to those who must support them, their continued existence.

In the early postwar years, before the West turned to dependence upon collective defense, Western governments sought, in good faith, an accommodation with the Soviet Union, an accommodation which would have poured massive U.S. economic assistance into Eastern Europe and the Soviet Union, reunified Germany, left all Europe without the presence of foreign troops, and eliminated the need for military alliances. The Soviets rejected this accommodation. Their behavior in Poland, in their occupation zone of Germany, and throughout Eastern Europe conclusively demonstrated to the Western peoples that an unarmed accommodation with the Soviet Union could only be had at the price of Soviet domination. In the wake of the Berlin blockade and of the Soviet-engineered coup in Czechoslovakia, the West turned to collective security and concluded the North Atlantic Treaty.

That treaty ushered in an era of American engagement in European security. At the conclusion of the war in 1945, the United States had begun the massive withdrawal of its forces from Europe. Well into the 1950s the United States intended to complete this withdrawal and to turn the defense of Europe over to Europe. In the early 1950s, the United States encouraged the creation of an independent European defense force. Europe had then, and has today, the manpower, wealth, and talent to provide unaided for its own defense. Yet only the United States proved able to provide the catalytic core around which an effective alliance force could be formed. After the failure of the effort to create an independent European defense, the United States reluctantly concluded that its continued military presence in Europe was a necessary prerequisite to a viable collective defense.

In the later 1950s and early 1960s, debate centered on the place of nuclear weapons in the alliance's defense and of the United States in providing that element of the defense. Here, too, alternatives were tried, and here, too, fundamental decisions were made which shape the world we live in and the debates we are engaged in today.

Initially it was NATO's intention to create a conventional defense of Europe sufficient to match Soviet capabilities and to counterbalance the Soviet geographic advantages. Such a Western force was designed. Alliance members agreed upon goals for its achievement. But these goals were not met, and within a short time of their adoption there was general agreement that they would never be. The creation of a peacetime military establishment fully sufficient for the conventional defense of Europe has consistently proved beyond the political capacity of democratic, pluralistic societies.

In consequence, the alliance turned early on to nuclear weapons to provide it the deterrent capability which its conventional forces, by themselves, lacked. Only by asserting a willingness to employ nuclear weapons, if need be, in the defense of Europe, could NATO prevent the continued disparity in conventional capabilities from inviting aggression or facilitating intimidation.

There was also debate in the 1950s and 1960s regarding participation in any alliance nuclear force. The British and the French developed nuclear capabilities of their own, and the United States offered Germany and other allies participation in a multilateral nuclear force. By the end of the 1960s, it was generally concluded that the U.K. and French systems contributed to Western security and to the credibility of NATO's deterrent posture, but that they were not and could never be an adequate substitute for a continuing American nuclear guarantee.

The West's last great nuclear debate thus culminated, in 1967, in the creation of an institution designed to resolve the issue of nuclear participation and to manage the alliance's nuclear posture. This institution was the Nuclear Planning Group. That debate also resulted, in that same year, in the enunciation of a strategy designed to extend the deterrent capability of American nuclear weapons to Europe while leaving the alliance many other alternatives, in times of crisis, short of a resort to nuclear weapons. that strategy was flexible response.

The critical element of this strategy is the concept of extended deterrence which links the power of the United States to the defense of Europe. Extended deterrence translates America's political commitment to regard an attack on Europe as an attack on America into military planning and capabilities. As a result, American forces are not structured or trained solely to protect America, nor American nuclear weapons designed solely to prevent nuclear attack upon America. The mission of American forces has been extended to deterrence of attacks against the alliance as a whole and to deterrence of intimidation or threat of force directed against any of its members.

In extending the umbrella of American power over Europe, a balance had to be established between forces in place and forces on call. If the United States put in Europe the force needed for a sustainable defense, the cost would be unacceptable to the American people and the level of American presence unbearable to the European public. If, on the other hand, the United States limited its commitment to European security solely to the promise of assistance in time of conflict, that commitment would lack the needed deterrent effect.

Over three decades an acceptable and effective balance between forces in place and forces on call has been established. This balance anchors each major element of American military power to the European Continent. The U.S. Army maintains the equivalent of over five divisions in Europe. The U.S. Air Force has here three tactical air forces. The U.S. Navy has two carrier battle groups in European waters. U.S. forces in Europe are equipped with both conventional and nuclear capabilities. Thus American troops in Europe are much more than mere tokens of the U.S. commitments, while remaining much less than the full commitment.

The Need for a Coherent Structure of Defense

Over the past 30 years the West has created the structure of collective security I have described. It has developed the military capabilities needed to sustain that structure, relying upon a combination of extended deterrence and forces in place. It has elaborated a strategy appropriate to that structure and to that combination of forces, the strategy of flexible response. In debating the continued validity of this legacy, one should recognize its fundamental unity and the interdependence of its elements. If the American strategic deterrent does not remain Europe's ultimate guarantee, the strategy of flexible response is no longer viable. If flexible response is no longer viable, the West can no longer confidently rest its defense upon the structure of collective security.

Should there be any doubt that Europe requires, in 1981 as in 1949, a coherent structure for defense, one need only study the training, the deployment, and the military doctrine of Soviet forces. Whatever their present intentions, the Soviets have designed and trained a force to attack, not to defend. Whatever their ultimate plans, the Soviets have deployed their forces to seize territory, not to hold it.

Should there exist any doubt that Western Europe, in 1981 as in 1949, must be secured not only against attack but against intimidation and threat of force, one has only to read the daily newspapers. Soviet public statements, directed to Western European audiences, consistently emphasize Russia's capability to destroy Europe, while, of course, promising not to do so unless necessary. When Soviet spokesmen, on visit to the Federal Republic of Germany, talk about the nuclear destruction of Hamburg, Cologne, and Bonn, is there any mistaking their meaning? If the Soviets speak this way at a time when they cannot safely attack Western Europe, what tone would they adopt in other circumstances?

How, then, is the alliance to respond to Soviet behavior? By mirroring it? By adopting a nuclear warfighting strategy? By restructuring our forces for offensive military operations? By engaging in the rhetorical bombast of blatant nuclear blackmail? This is how the Soviets claim we are responding in an effort to transfer their characteristic attitudes to us.

Yet despite the provocations of Soviet propaganda, and despite the steady buildup of Soviet military power, the alliance has remained faithful to its principles.

- NATO remains a defensive alliance. Western armed forces are designed to protect our freedom and independence, not to expand our influence or intimidate our adversaries.
- NATO will never initiate the use of force. No conflict at any level will ever be begun by NATO; no international border will ever be violated by NATO forces.
- NATO's strategy is one of deterrence. The purpose of NATO forces is, by their existence and known capabilities, to deny to any potential adversary the prospect of securing advantage through military action at any level.
- NATO will always negotiate. The West will always be willing to relieve the causes of tension through negotiation and to reduce the burden and risks of defense through verifiable arms control agreements based upon equality of rights and limitations.

Over the past several years the alliance has continued to act in accordance with these principles. Two years ago, for example, the alliance decided to modernize nuclear forces in Europe through the deployment by the United States of cruise missiles and the replacement of the Pershing ballistic missile by a new model of longer range. This decision was taken in order to reinforce the alliance's structure of collective security, to maintain the credibility of America's extended deterrent, and to support the alliance's strategy of flexible response. This decision represented continuity, not change.

- These deployments would give the alliance no capability it did not previously have, for as the Soviets never cease to remind us, there are other systems in Europe which can strike Soviet territory.
- These deployments would not put Soviet strategic forces at risk, for those forces are for the most part beyond the range of these new systems.
- These deployments would not increase the risk of a nuclear war limited to Europe but on the contrary serve to remind the Soviets that they cannot hope to limit a nuclear war to the territory of others.
- These deployments have not been forced upon Europe but were rather arrived at though a true process of consultation and in response to a need felt at least as keenly on this side of the Atlantic as on mine.
- These deployments have not set back the prospects of arms control but, on the contrary, have forced the Soviet Union to accept, in principle at least, the need to limit its nuclear weapons targeted in Europe.
- These deployments are not designed to isolate the United States from Europe but rather to reinforce the strategic unity of the alliance and induce the Soviet Union to treat the security of Western Europe on equal terms with its own.

The decisions made by President Reagan this summer on strategic forces are equally important for the people of Europe. The alliance decision of 1979 is designed to more securely link America's strategic deterrent to the security of Europe. But only through the modernization of U.S. strategic forces can the United States continue to extend a credible deterrent over Europe. The steps which the United States is undertaking at President's Reagan's direction—building a new bomber, accelerating the development of a new submarine-launched ballistic missile, improving America's strategic command and control system, and modernizing our land-based missile force with the deployment of MX missiles—are all designed to provide America a secure second-strike capability, one which cannot be preempted or neutralized. It is this secure second-strike capability upon which the West's defense ultimately rests.

While moving to sustain the NATO system of extended deterrence, President Reagan has also taken steps to give substance to the alliance's commitment to meaningful arms control. On November 18 he proposed new negotiations on strategic forces, beginning as early as possible in the new year. He intends that these negotiations build upon the accomplishments of the past but also go well beyond them toward the achievement of significant reductions in strategic arms on both sides.

President Reagan reemphasized on that same occasion the U.S. desire to see reductions in conventional force levels in Europe, to an equal ceiling for both East and West. He reaffirmed our desire to see agreement at the CSCE [Conference on Security and Cooperation in Europe] review conference in Madrid on the convening of a conference on disarmament in Europe. Most significantly, he proposed that the United States and the Soviet Union agree, in the negotiations on intermediate-range nuclear forces which have just begun, to eliminate the long-range Soviet missiles capable of threatening Europe and to cancel the alliance's plans to deploy long-range American missiles.

The details of this proposal are now being put to the Soviet Union. The Soviets for their part will be putting their proposals to us. These we will examine seriously and consider upon their merits. We have entered these negotiations in good faith, as President Reagan has emphasized. We hope the Soviet leaders for their part will consider with equal care the offer we have put to them.

The substance of the Soviet position on this issue, as publicly expressed by them to date, is familiar to you. They maintain that they need over 1,100 long-range missile warheads capable of striking Europe because the United States maintains aircraft in Europe. They do not explain why their own aircraft in Europe—more numerous than those of the United States—do not suffice to counter this threat. They do not explain why they need twice the number of missile warheads in 1981 to counter the same number of American aircraft as were in Europe in 1975.

The Soviets also argue that they require military forces to counter threats from other nations. They thus claim the right not to parity with the United States but to parity with every potential adversary combined. To grant them this right would be to legitimize global Soviet hegemony, for, as we know, total security for any one nation means total insecurity for all others.

That the Soviet Union puts forward such implausible argumentation is understandable, for their case is weak and their military buildup is coming under increasing scrutiny around the world. The Soviet Union cannot, however, expect to secure at the conference table that military superiority which they have pursued through military programs for the past decade or more. We are hopeful, therefore, that the Soviets will ultimately be induced, both in negotiations on intermediate-range missiles and on strategic nuclear forces, to accept a negotiated balance based upon parity between our two countries at much lower levels of military effort and risk.

I noted in opening that the West today stands at another crossroad. In the past, Europe chose collective defense over a one-sided accommodation with the Soviet Union. In the past Europe chose an Atlantic alliance over a European defense force. In the past Europe chose to rely on a deterrent, rather than a warfighting strategy. Today these same choices are once again posed. Today men of vision must again lead their nations on a course which will maintain the peace and preserve freedom. Today we must ask ourselves whether the choices of another generation remain valid for its successors.

Has the world changed so much that the Soviet Union could be trusted not to take advantage of its geopolitical situation to dominate an undefended Europe? I can think of little in recent Soviet behavior—whether in Afghanistan or in the tone in which its leaders habitually address Western Europe—which supports this view.

Has Western Europe evolved, in its quest for unity, to the point where it can sustain its own defense unaided? If such a movement were to manifest itself in Europe, I can assure you that the United States would interpose no obstacles. America has supported every step toward European unification, and it has accepted, with equanimity and good grace, I think it fair to say, whatever diminution of U.S. influence has resulted. Without denying that the American military presence in Europe brings with it influence and prestige, I can safely say that the American people would not sustain these forces here 1 day beyond that point at which they were no longer needed or wanted.

If America has no desire to outstay its welcome in Europe, however, neither do we entertain the slightest intention of abandoning our commitment to it—a commitment which I believe is as vital to our common security today as it was in 1949, when first extended. Neither do I believe that the people of Europe, when they examine the alternatives, will abandon a structure for European security which has given them the longest period of peace, prosperity, and freedom in their history, and in that of mankind.

Clearly we cannot take the current nuclear debate in Europe lightly. Clearly those of us who believe in a structure of peace based upon collective security must once again make our case. Clearly those of us who believe that such a structure can only be held together through the extension by the United States of a nuclear guarantee to Europe, must once again contend with the alternatives. Yet when those alternatives are examined—a Europe undefended and subject to Soviet intimidation or a Europe united in its own defense—I can only conclude that the first is undesirable and the second, for the present, unattainable. Thus, at the risk of once again being misinterpreted, let me conclude, as I did on a similar occasion in Brussels 2 months ago, that for me, and for my government, there is no other choice but to sustain the alliance structure we have inherited and to maintain the alliance strategy which gives it life.■

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Current
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President Reagan

Arms Control and the Future of East-West Relations

May 9, 1982

United States Department of State
Bureau of Public Affairs
Washington, D.C.

Following is a commencement address by President Reagan at Eureka College, Peoria, Illinois, May 9, 1982. (Introductory remarks deleted.)

Graduation day is called "commencement" and properly so because it is both a recognition of completion and a beginning. And I would like, seriously, to talk to you about this new phase—the society in which you're now going to take your place as full-time participants. You're no longer observers. You will be [illegible]d upon to make decisions and express your views on global events because those events will affect your lives.

I've spoken of similarities, and the 1980s like the 1930s may be one of those—a crucial juncture in history that will determine the direction of the future. In about a month I will meet in Europe with the leaders of nations who are our closest friends and allies. At Versailles, leaders of the industrial powers of the world will seek better ways to meet today's economic challenges. In Bonn, I will join my colleagues from the Atlantic alliance nations to renew those ties which have been the foundation of Western, free-world defense for 37 years. There will also be meetings in Rome and London.

Now, these meetings are significant for a simple but very important reason. Our own nation's fate is directly linked to that of our sister democracies in Western Europe. The values for which America and all democratic nations stand represent the culmination of Western culture. Andrei Sakharov, the distinguished Nobel Laureate and courageous Soviet human rights advocate, has written in a message smuggled to freedom: "I believe in Western man. I have faith in his mind which is practical and efficient and, at the same time, aspires to great goals. I have faith in his good intentions and in his decisiveness."

This glorious tradition requires a partnership to preserve and protect it. Only as partners can we hope to achieve the goal of a peaceful community of nations. Only as partners can we defend the values of democracy and human dignity that we hold so dear.

There is a single, major issue in our partnership which will underlie the discussions that I will have with the European leaders—the future of Western relations with the Soviet Union. How should we deal with the Soviet Union in the years ahead? What framework should guide our conduct and our policies toward it? And what can we realistically expect from a world power of such deep fears, hostilities, and external ambitions?

I believe the unity of the West is the foundation for any successful relationship with the East. Without Western unity we'll squander our energies in bickering while the Soviets continue as they please. With unity, we have the strength to moderate Soviet behavior. We've done so in the past and we can do so again.

Our challenge is to establish a framework in which sound East-West relations will endure. I'm optimistic that we can build a more constructive relationship with the Soviet Union. To do so, however, we must understand the nature of the Soviet system and the lessons of the past.

The Soviet Union is a huge empire ruled by an elite that holds all power and all privilege. They hold it tightly because, as we've seen in Poland, they fear what might happen if even the smallest amount of control slips from their grasp. They fear the infectiousness of even a little freedom and because of this in many ways their system has failed. The Soviet empire is faltering because it is rigid—centralized control has destroyed incentives for innovation, efficiency, and individual achievement. Spiritually, there is a sense of malaise and resentment.

But in the midst of social and economic problems, the Soviet dictatorship has forged the largest armed force in the world. It has done so by preempting the human needs of its people, and, in the end, this course will undermine the foundations of the Soviet system. Harry Truman was right when he said of the Soviets that, "When you try to conquer other people or extend yourself over vast areas you cannot win in the long run."

Yet Soviet aggressiveness has grown as Soviet military power has increased. To compensate, we must learn from the lessons of the past. When the West has stood unified and firm, the Soviet Union has taken heed. For 35 years Western Europe has lived free despite the shadow of Soviet military might. Through unity, you'll remember from your modern history courses, the West secured the withdrawal of occupation forces from Austria and the recognition of its rights in Berlin.

Other Western policies have not been successful. East-West trade was expanded in the hope of providing incentives for Soviet restraint, but the Soviets exploited the benefits of trade without moderating their behavior. Despite a decade of ambitious arms control efforts, the Soviet buildup continues. And despite its signature of the Helsinki agreements on human rights, the Soviet Union has not relaxed its hold on its own people or those of Eastern Europe.

During the 1970s some of us forgot the warning of President Kennedy, who said that the Soviets "have offered to trade us an apple for an orchard. We don't do that in this country." But we came perilously close to doing just that.

If East-West relations in the detente era in Europe have yielded disappointment, detente outside Europe has yielded a severe disillusionment for those who expected a moderation of Soviet behavior. The Soviet Union continues to support Vietnam in its occupation of Kampuchea and its massive military presence in Laos. It is engaged in a war of aggression against Afghanistan. Soviet proxy forces have brought instability and conflict to Africa and Central America.

We are now approaching an extremely important phase in East-West relations as the current Soviet leadership is succeeded by a new generation. Both the current and the new Soviet leadership should realize aggressive policies will meet a firm Western response. On the other hand, a Soviet leadership devoted to improving its people's lives, rather than expanding its armed conquests, will find a sympathetic partner in the West. The West will respond with expanded trade and other forms of cooperation. But all of this depends on Soviet actions. Standing in the Athenian marketplace 2,000 years ago, Demosthenes said: "What sane man would let another man's words rather than his deeds proclaim who is at peace and who is at war with him?"

Peace is not the absence of conflict but the ability to cope with conflict by peaceful means. I believe we can cope. I believe that the West can fashion a realistic, durable policy that will protect our interests and keep the peace, not just for this generation but for your children and your grandchildren.

I believe such a policy consists of five points: military balance, economic security, regional stability, arms reductions, and dialogue. Now, these are the means by which we can seek peace with the Soviet Union in the years ahead. Today, I want to set this five-point program to guide the future of our East-West relations, set it out for all to hear and see.

Military Balance

First, a sound East-West military balance is absolutely essential. Last week NATO published a comprehensive comparison of its forces with those of the Warsaw Pact. Its message is clear: During the past decade, the Soviet Union has built up its forces across the board. During that same period, the defense expenditures of the United States declined in real terms. The United States has already undertaken steps to recover from that decade of neglect. And I should add that the expenditures of our European allies have increased slowly but steadily, something we often fail to recognize here at home.

Economic Security

The second point on which we must reach consensus with our allies deals with economic security. Consultations are under way among Western nations on the transfer of militarily significant technology and the extension of financial credits to the East as well as on the question of energy dependence on the East—that energy dependence of Europe. We recognize that some of our allies' economic requirements are distinct from our own. But the Soviets must not have access to Western technology with military applications, and we must not subsidize the Soviet economy. The Soviet Union must make the difficult choices brought on by its military budgets and economic shortcomings.

Regional Stability

The third element is regional stability with peaceful change. Last year in a speech in Philadelphia and in the summit meetings at Cancun, I outlined the basic American plan to assist the developing world. These principles for economic development remain the foundation of our approach. They represent no threat to the Soviet Union. Yet in many areas of the developing world we find that Soviet arms and Soviet-supported troops are attempting to destabilize societies and extend Moscow's influence.

High on our agenda must be progress toward peace in Afghanistan. The United States is prepared to engage in a serious effort to negotiate an end to the conflict caused by the Soviet invasion of that country. We are ready to cooperate in an international effort to resolve this problem, to secure a full Soviet withdrawal from Afghanistan, and to insure self-determination for the Afghan people.

In southern Africa, working closely with our Western allies and the African states, we've made real progress toward independence for Namibia. These negotiations, if successful, will result in peaceful and secure conditions throughout southern Africa. The simultaneous withdrawal of Cuban forces from Angola is essential to achieving Namibian independence, as well as creating long-range prospects for peace in the region.

Central America also has become a dangerous point of tension in East-West relations. The Soviet Union cannot escape responsibility for the violence and suffering in the region caused by its support for Cuban activities in Central America and its accelerated transfer of advanced military equipment to Cuba.

However, it was in Eastern Europe that the hopes of the 1970s were greatest, and it is there that they have been the most bitterly disappointed. There was hope that the people of Poland could develop a freer society. But the Soviet Union has refused to allow the people of Poland to decide their own fate, just as it refused to allow the people of Hungary to decide theirs in 1956 or the people of Czechoslovakia in 1968.

If martial law in Poland is lifted, if all the political prisoners are released, and if a dialogue is restored with the Solidarity union, the United States is prepared to join in a program of economic support. Water cannons and clubs against the Polish people are hardly the kind of dialogue that gives us hope. It is up to the Soviets and their client regimes to show good faith by concrete actions.

Arms Reduction

The fourth point is arms reduction. I know that this weighs heavily on many of your minds. In our 1931 *Prism* [Eureka College yearbook], we quoted Carl Sandburg, who in his own beautiful way quoted the mother prairie, saying, "Have you seen a red sunset drip over one of my cornfields, the shore of night stars, the wave lines of dawn up a wheat valley?" What an idyllic scene that paints in our minds—and what a nightmarish prospect that a huge mushroom cloud might someday destroy such beauty. My duty as President is to insure that the ultimate nightmare never occurs, that the prairies and the cities and the people who inhabit them remain free and untouched by nuclear conflict.

I wish more than anything there were a simple policy that would eliminate that nuclear danger. But there are only difficult policy choices through which we can achieve a stable nuclear balance at the lowest possible level.

I do not doubt that the Soviet people and, yes, the Soviet leaders have an overriding interest in preventing the use of nuclear weapons. The Soviet Union within the memory of its leaders has known the devastation of total conventional war and knows that nuclear war would be even more calamitous. Yet, so far, the Soviet Union has used arms control negotiations primarily as an instrument to restrict U.S. defense programs and, in conjunction with their own arms buildup, a means to enhance Soviet power and prestige.

Unfortunately, for some time suspicions have grown that the Soviet Union has not been living up to its obligations under existing arms control treaties. There is conclusive evidence the Soviet Union has provided toxins to the Laotians and Vietnamese for use against defenseless villagers in Southeast Asia. And the Soviets themselves are employing chemical weapons on the freedom fighters in Afghanistan.

We must establish firm criteria for arms control in the 1980s if we're to secure genuine and lasting restraint on Soviet military programs through arms control. We must seek agreements which are verifiable, equitable, and militarily significant. Agreements that provide only the appearance of arms control breed dangerous illusions.

Last November, I committed the United States to seek significant reductions on nuclear and conventional forces. In Geneva, we have since proposed limits on U.S. and Soviet intermediate-range missiles, including the complete elimination of the most threatening systems on both sides.

In Vienna, we're negotiating, together with our allies, for reductions of conventional forces in Europe. In the 40-nation U.N. Committee on Disarmament, the United States seeks a total ban on all chemical weapons.

Since the first days of my Administration, we've been working on our approach to the crucial issue of strategic arms and the control and negotiations for control of those arms with the Soviet Union. The study and analysis required has been complex and difficult. It had to be undertaken deliberately, thoroughly, and correctly. We've laid a solid basis for these negotiations. We're consulting with congressional leaders and with our allies, and we are now ready to proceed.

The main threat to peace posed by nuclear weapons today is the growing instability of the nuclear balance. This is due to the increasingly destructive potential of the massive Soviet buildup in its ballistic missile force.

Therefore, our goal is to enhance deterrence and achieve stability through significant reductions in the most destabilizing nuclear systems—ballistic missiles and especially the giant intercontinental ballistic missiles—while maintaining a nuclear capability sufficient to deter conflict, to underwrite our national security, and to meet our commitment to allies and friends.

For the immediate future, I'm asking my START—and START really means, we've given up on SALT [Strategic Arms Limitation Talks], START means Strategic Arms Reduction Talks—negotiating team to propose to their Soviet counterparts a practical, phased reduction plan. The focus of our efforts will be to reduce significantly the most destabilizing systems—the ballistic missiles, the number of warheads they carry, and their overall destructive potential.

At the first phase, or the end of the first phase of START, I expect ballistic missile warheads, the most serious threat we face, to be reduced to equal levels, equal ceilings, at least a third below the current levels. To enhance stability, I would ask that no more than half of those warheads be land based. I hope that these warhead reductions as well as significant reductions in missiles themselves could be achieved as rapidly as possible.

In a second phase, we'll seek to achieve an equal ceiling on other elements of our strategic nuclear forces including limits on the ballistic missile throw-weight at less than current American levels. In both phases, we shall insist on verification procedures to insure compliance with the agreement. This, I might say, will be the 20th time that we have sought such negotiations with the Soviet Union since World War II.

The monumental task of reducing and reshaping our strategic forces to enhance stability will take many years of concentrated effort. But I believe that it will be possible to reduce the risks of war by removing the instabilities that now exist and by dismantling the nuclear menance. I have written to President Brezhnev and directed Secretary Haig to approach the Soviet Government concerning the initiation of formal negotiations on the reduction of strategic nuclear arms, START, at the earliest opportunity. We hope negotiations will begin by the end of June.

We will negotiate seriously, in good faith, and carefully consider all proposals made by the Soviet Union. If they approach these negotiations in the same spirit, I'm confident that together we can achieve an agreement of enduring value that reduces the number of nuclear weapons, halts the growth in strategic forces, and opens the way to even more far-reaching steps in the future.

I hope the commencement today will also mark the commencement of a new era, in both senses of the word a new start toward a more peaceful and secure world.

East-West Dialogue

The fifth and final point I propose for East-West relations is dialogue. I've always believed that people's problems can be solved when people talk to each other instead of about each other. And

I've already expressed my own desire to meet with President Brezhnev in New York next month. If this can't be done, I'd hope we could arrange a future meeting where positive results can be anticipated. And when we sit down, I'll tell President Brezhnev that the United States is ready to build a new understanding based upon the principles I've outlined today. I'll tell him that his government and his people have nothing to fear from the United States. The free nations living at peace in the world community can vouch for the fact that we seek only harmony. And I'll ask President Brezhnev why our two nations can't practice mutual restraint. Why can't our peoples enjoy the benefits that would flow from real cooperation? Why can't we reduce the number of horrendous weapons?

Perhaps I should also speak to him of this school and these graduates who are leaving it today—of your hopes for the future, of your deep desire for peace, and yet your strong commitment to defend your values if threatened. Perhaps if he someday could attend such a ceremony as this, he'd better understand America. In the only system he knows, you would be here by the decision of government, and on this day the government representatives would be here telling most, if not all of you, where you were going to report to work tomorrow.

But as we go to Europe for the talks and as we proceed in the important challenges facing this country, I want you to know that I will be thinking of you and of Eureka and what you represent. In one of my yearbooks, I remember reading that, "The work of the prairie is to be the soil for the growth of a strong Western culture." I believe Eureka is fulfilling that work. You, the members of the 1982 graduating class, are this year's harvest.

I spoke of the difference between our two countries. I try to follow the humor of the Russian people. We don't hear much about the Russian people. We hear about the Russian leaders. But you can learn a lot because they do have a sense of humor, and you can learn from the jokes they're telling. And one of the most recent jokes I found kind of, well, personally interesting. Maybe it might tell you something about your country. The joke they tell is that an American and a Russian were arguing about the differences between our two countries. And the American said, "Look. In my country I can walk into the Oval Office, I can hit the desk with my fist, and say, 'President Reagan, I don't like the way you're governing the United States.'" And the Russian said, "I can do that." The American said, "What?" He says, "I can walk into the Kremlin, into Brezhnev's office. I can pound Brezhnev's desk, and I can say, 'Mr. President, I don't like the way Ronald Reagan is governing the United States.'"

Eureka as an institution and you as individuals are sustaining the best of Western man's ideals. As a fellow graduate and in the office I hold, I'll do my best to uphold these same ideals. To the Class of 1982, congratulations, and God bless you. ■

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97th Congress
1st Session } **COMMITTEE PRINT**

INTERIM REPORT ON NUCLEAR WEAPONS IN EUROPE

Prepared by the North Atlantic Assembly's Special Committee on Nuclear Weapons in Europe

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A REPORT

TO THE

COMMITTEE ON FOREIGN RELATIONS

UNITED STATES SENATE

DECEMBER 1981

Printed for the use of the Committee on Foreign Relations

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LETTER OF TRANSMITTAL

November 10, 1981.

Hon. Charles H. Percy,
Chairman, Committee on Foreign Relations,
U.S. Senate, Washington, D.C.

Dear Mr. Chairman: By the time of President Reagan's inauguration in January 1981, it had become clear that NATO's dual-track decision of December 1979—to modernize its theater nuclear forces (TNF) while seeking negotiated East-West limits on such weaponry—had become a subject of major controversy within the Atlantic Alliance. Although NATO's history is replete with instances of internal dispute, debate over TNF appeared to be expanding into the realm of citizen discussion far more than had previous issues. Because this growth in "grass roots" concern had obvious implications for the solidarity of an alliance which depends upon political consensus, the North Atlantic Assembly—NATO's interparliamentary arm—determined earlier this year to establish a Special Committee on Nuclear Weapons in Europe to study the political and military aspects of TNF modernization and arms control. The guiding premise was that a group of parliamentarians representing a cross-section of views from NATO's fifteen member-nations could contribute to both governmental and public understanding of the complexities surrounding the TNF issue.

Since its creation, the Special Committee has conducted extensive interviews in Washington, Bonn, London, Brussels, and SHAPE headquarters in Belgium. Those interviewed include officials from current and past governments involved in the NATO decision, groups of parliamentarians, experts on strategic issues, and leaders of European citizen groups opposing new nuclear deployments. The result of these initial efforts is the attached interim report, drafted by the Special Committee's rapporteurs. The report will be updated as the Special Committee continues its work in the months ahead.

Last month, when the North Atlantic Assembly convened in Munich for its 27th annual session, the TNF issue was the major topic of interest. In both the Political and the Military committees, the interim report was discussed at length, and during the Assembly's full plenary session a TNF resolution presented by the Special Committee provided the focus for debate. I am pleased to report that both of the Special Committee's products—the interim report and the resolution—won widespread endorsement. The interim report earned praise, across the entire political spectrum, for offering a balanced and comprehensive treatment of the TNF question. And the TNF resolution drafted by the Special Committee gained overwhelming support in the plenary vote. In the belief that these two documents contain information valuable to public discussion of NATO's future, I respectfully submit both for publication.

Sincerely,

JOSEPH R. BIDEN, Jr.,
Chairman, Special Committee
on Nuclear Weapons in Europe.

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RESOLUTION
ON
NUCLEAR WEAPONS IN EUROPE

(Adopted by the North Atlantic Assembly on October 16, 1981)

The Assembly,

Recognising the far-reaching significance of the NATO 12 December 1979 "dual-track" decision in several respects:

—to enhance NATO's strategy of flexible response by producing a visible "coupling" of the American strategic deterrent and European defence;

—to provide a much-needed response to modernised and expanded Soviet long-range theatre nuclear forces (LRTNF);

—to facilitate permanent limitations on LRTNF through arms control negotiations;

—to demonstrate Alliance political cohesion and solidarity in risk sharing;

Welcoming the determination of member governments to sustain the consensus behind the 12 December "dual-track" decision;

Noting that the deployment of the SS-20 is continuing beyond the levels predicted in 1979, while stressing that the number of LRTNF required by NATO should not be directly tied to Soviet force levels;

Noting the recent threat assessment by the High Level Group on the extent and pace of Soviet SS-20 deployment and of Soviet modernisation at all levels of theatre nuclear forces;

Welcoming the announcement that negotiations on LRTNF between the United States and the Soviet Union will commence on 30 November 1981;

Noting that a continued commitment to modernisation is essential if real progress in arms control is to be achieved;

Stressing that limitations on LRTNF will not provide stability unless achieved within a framework of limitations on central strategic systems;

Recognising that a "zero outcome", the mutual elimination of the land-based missile component of LRTNF—however difficult to achieve—represents the ideal objective of negotiations;

Concerned that confusion exists about (a) the relationship between modernisation and arms control; (b) the precise objective of the LRTNF negotiations; and (c) the extent to which NATO deployments depend upon Soviet actions and the results of arms control negotiations;

Concerned that the growth of opposition in several European countries to the dual track decision could undermine NATO's negotiating position and Alliance cohesion and could inadvertently serve Soviet purposes;

Urges member governments:

1. to maintain an equal emphasis on the twin objectives of modernisation and arms control.

2. to develop and maintain a unified Allied negotiating position on LRTNF arms control.

3. to undertake concerted efforts to persuade their publics that the dual-track decision constitutes a strategy for achieving military stability and sustaining peace in Europe.

Urges the United States Administration:

1. to continue consultations with its Alliance partners of LRTNF arms control and also on future theatre nuclear force modernisation requirements.

2. to proceed as now planned to undertake early negotiations with the Soviet Union on the limitation and reduction of strategic nuclear arms.

INTERIM REPORT OF THE SPECIAL COMMITTEE ON NUCLEAR WEAPONS IN EUROPE

COMPOSITION OF THE SPECIAL COMMITTEE ON NUCLEAR WEAPONS IN EUROPE

Chairman:	Senator Joseph BIDEN (United States)
Vice Chairmen:	Mr. Klaas G. DE VRIES (Netherlands)
	Mr. Alois MERTES (Federal Republic of Germany)
Rapporteurs:	Mr. John CARTWRIGHT (United Kingdom)
	Mr. Julian CRITCHLEY (United Kingdom)
Members:	Mr. Lasse BUDTZ (Denmark)
	On. Massimo DE CAROLIS (Italy)
	Mr. Jacques CHAUMONT (France)
	Sen. Severino FALLUCCHI (Italy)
	Mr. Michael FORRESTALL (Canada)
	Mr. Jacques HUYGHUES DES ETAGES (France)
	Sen. Larry PRESSLER (United States)
	Mr. Marcel REMACLE (Belgium)
	(to be appointed—Federal Republic of Germany)

SUMMARY

The report begins with a brief discussion of the work of the Nuclear Planning Group (NPG) and the current status of Soviet theatre nuclear forces (TNF).

With regard to the proposal to modernise NATO's TNF, the report outlines the basic elements of the NATO 12th December double-track decision and then analyses the principal issues that have occupied the Special Committee's attention: the rationale for the modernisation proposal and the consequent national differences concerning the objectives of NATO's current decision: the reasons for the choice of 572 as the number of warheads to be deployed; the current status of the implementation of the modernisation programme; revived interest in the seabased option and official opposition to this suggestion; the current work of the HLG; and the policy of the Reagan administration towards Alliance nuclear strategy.

The report then examines progress in the arms control track of the double decision. It comments on the arms control negotiating approach agreed by the Alliance in 1979 and the attitude towards LRTNF negotiations of the new Administration.

A chapter on "Problems and Prospects" summarises the main points that emerged from the Special Committee's deliberations—the determination to maintain the 12th December consensus, the importance of arms control, the ambiguity concerning the objectives of NATO's position and the importance of Alliance consultation.

Pertinent developments in the NATO members already committed to deployment or considering their decisions are reviewed in chapters on the Federal Republic of Germany, the United Kingdom, the Netherlands, Italy and Belgium. The chapters on the Federal Republic and the United Kingdom also include summaries of the meetings of the Special Committee in Bonn and London during June 1981.

INTRODUCTION

1. During the past few years, public interest within the Alliance concerning the role of nuclear weapons in NATO strategy has increased substantially. This public concern was demonstrated by the strong reaction to the proposal to deploy the Enhanced Radiation Warhead (ERW) and by the debate that surrounded NATO's decision of December 1979 to modernise its long-range theatre nuclear forces (LRTNF). A number of factors suggest that the interest and concern manifested during these episodes will continue to influence the decisions of member governments on Alliance nuclear policy. These factors include:

—A general uncertainty over the future of the SALT process and the objectives of the new American administration and concern over developments in the nuclear capabilities of both superpowers, which suggest the possibility of a less stable strategic relationship between them;

—The general deterioration in East-West relations and the consequent heightening of public awareness concerning the dangers of nuclear war;

—The implementation of the modernisation part of the NATO LRTNF decision, particularly the siting of bases and the continued postponement of a deployment decision by the Dutch and Belgian governments;

—The current and future work of the High Level Group concerning the shorter range tactical or battlefield nuclear systems, which will almost certainly lead to further proposals for modification and modernisation of the NATO TNF inventory;

—The modernisation plans of both the United Kingdom and France concerning the upgrading of their independent nuclear deterrents.

2. The cumulative effect of these factors will be to ensure that public awareness of nuclear issues remains high. It is certain that future proposals by NATO concerning the role and characteristics of nuclear weapons deployed in Europe will be the subject of serious public scrutiny and debate.

3. In view of this increased public awareness, the Assembly has created a working group comprising members of the Military and Political Committees to study the question of nuclear weapons in Europe in detail.

4. The objective of the work of this group will be to provide the basis for informed discussion and debate both within and outside the Assembly on the current and future role in Alliance strategy of nuclear weapons based in Europe, and the contribution to be made to Alliance security in this area by arms control negotiations. Particular emphasis will be placed on assessing different national perspectives and attitudes including national party political views towards the

key issues of modernisation and arms control, and the relative priorities to be accorded to either issue.

5. This objective will be achieved by examining and monitoring the work of the Nuclear Planning Group (NPG) and of the two groups established by NATO to coordinate policies in the key areas of modernisation and arms control, namely, the High Level Group (HLG) and the Special Consultative Group (SCG). Sources for the report will include briefings at NATO, SHAPE and national capitals.

PART I—THE ISSUES

Chapter I—Background

THE EVOLUTION OF NATO'S TNF DOCTRINE AND CAPABILITIES

6. (To be included at a later date).

THE WORK OF THE NUCLEAR PLANNING GROUP (NPG)

7. The Nuclear Planning Group (NPG) was established in 1967, following the failure of the Multilateral Force (MLF) concept, to provide a forum in which Alliance members could participate in the evolution of NATO's nuclear policy. Originally composed of four permanent members (the United States, the United Kingdom, the Federal Republic of Germany and Italy) and three members rotated at 18-month intervals, since 1979 it has comprised all Alliance members in the Defence Planning Committee (i.e. all members except France and Iceland).

8. The NPG was initially concerned with the theory and doctrine of tactical nuclear weapons and concentrated on developing provisional political guidelines for the use of nuclear weapons. A series of analytical studies was made examining the circumstances under which nuclear weapons could be used, the criteria ministers would take into account in their consultations concerning such use, and the results of theatre nuclear weapon (TNW) use. By the mid-1970's, the NPG moved to procurement considerations as system replacement became necessary.

SOVIET CAPABILITIES

9. The Soviet Union first deployed long-range nuclear-capable bombers in the mid-1950's. The 1981 Department of Defense (DOD) Report notes that the Soviet long-range aviation force now consists of 450 Badger and Blinder types and about 65–70 of the more modern Backfire (first deployed in 1974).

10. The Soviet Union first deployed medium and intermediate-range ballistic missiles (MRBM and IRBM) SS–4s and SS–5s in the late 1950's, eventually deploying approximately 700. In 1977, they began to modernise this force, through the deployment of the mobile Mirved SS–20. The SS–20 is considerably more capable than the SS–4s and SS–5s, some of which it has replaced. According to United States sources, the SS–20 is a mobile system, contrasted with the silo-based SS–4 and SS–5, significantly enhancing its survivability. It has a greater range (over 4,000 kms) than either the SS–4 or SS–5. It has significantly greater accuracy, reported as 440 feet over a 2,500 mile range. The SS–20 has three warheads per missile, the SS–4 and SS–5 have one. The SS–20 has a reload capability, further enhancing Soviet TNF warfighting capability.

11. The Soviet Union has insisted that deployment of the SS–20 represents a normal stage in the modernisation of its nuclear forces, and that the SS–20 is intended for carrying out the same tasks as the medium-range missiles of older type which it now replaces.

12. The recent NPG Communique [1] reports that 220 SS–20 launchers are currently deployed and that these deployments are continuing at a rapid pace. American officials confirmed that the Soviet rate of deployment of the SS–20 is much greater than had been expected and claimed that the Soviet Union has deployed more than 572 warheads between the time of the NATO decision and 1981. While a number of SS–4s and SS–5s have been retired, the NATO Communiqué notes that some 380 SS–4s and SS–5s are still being maintained. According to the 1981 DOD Report, this indicates that "the SS–20 is augmenting rather than replacing those older missiles".

Chapter II—The Modernisation of NATO's Nuclear Forces

13. In May 1977, as part of its Long-Term Defence Programme, NATO established Task Force 10 to examine the deficiencies in NATO's TNF position. The NPG was given responsibility for Task Force 10. At its October 1977 meeting in Bari, Italy, the NPG established the High Level Group (HLG) as a subordinate body directed to examine NATO's TNF and the need for modernisation. The HLG was made up of officials from national capitals of all countries except France, Iceland, Luxembourg and Portugal and was chaired by the United States.

14. On 12th December, 1979, NATO ministers [2] agreed to modernise NATO's LRTNF through the deployment of 572 single warhead nuclear missiles in five European countries: 108 Pershing II missiles and 96 GLCMs in the Federal Republic, 160 GLCMs in the United Kingdom, 112 in Italy, 48 in both Belgium and the Netherlands. All systems will be deployed with American forces only and will be under American command and control. The cost of development and production of these systems will be paid for by the United States; the NATO Allies will contribute to the infrastructure and support of the systems through their contribution to the NATO Infrastructure Fund.

15. At the same time, NATO expressed its willingness to negotiate limits on its deployment in exchange for reciprocal Soviet limitations, particularly on the land-based missile component of their LRTNF.

16. During its meetings in Washington, Bonn and London, the Special Committee focussed on the following aspects of NATO's nuclear modernisation: the rationale for LRTNF modernisation; the choice of 572 as the number of LRTNF warheads to be deployed; the current state of implementation of the LRTNF programme; the sea-basing option for LRTNF, the current work of the HLG; and the policy of the current American administration concerning Alliance nuclear strategy.

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[1] Communiqué of the NPG, 9th April, 1981.

[2] See NATO Communiqué in annex. Despite the official consensus for the decision, Belgium and the Netherlands reserved their positions concerning deployment (Belgium initially for six months, the Netherlands until December 1981 pending progress in arms control negotiations).

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THE RATIONALE FOR LRTNF MODERNISATION

17. Since the beginning of the Alliance, the willingness and capacity of the United States to use its nuclear forces in the defence of Europe has been a traditional preoccupation within NATO. Part of this debate has concerned the argument that the credibility of the American guarantee is strengthened by the basing in Europe of nuclear forces capable of striking the Soviet Union. Nuclear missiles were stationed in Europe in the early 1960's and nuclear-capable aircraft (F–111s) with a nuclear strike mission against the Soviet Union are currently stationed in the United Kingdom. In doctrinal terms, the credibility of Alliance nuclear strategy was enhanced by the adoption of the doctrine of flexible response in 1967. The adoption of this strategy ended the doubts that had dominated Alliance discussions in the 1960's. However, in the mid-1970's, public attention was again drawn to the adequacy of Alliance nuclear strategy through a speech by Chancellor Schmidt.

18. Speaking to the International Institute for Strategic Studies (IISS) in October 1977, Chancellor Schmidt made several general observations concerning Alliance security and trends in the strategic nuclear balance. In this speech, the Chancellor argued that strategic parity, as codified by SALT, "neutralised" the strategic nuclear capabilities of the two superpowers, and that this development magnified the disparities between East and West in tactical nuclear and conventional weapons. In his view, a SALT process confined to the superpowers would impair the security of Western Europe unless the disparities of power in Europe were removed parallel to the SALT negotiations. Behind these remarks lay the concern that SALT II excluded Soviet systems aimed at Europe (the SS–20 and Backfire) but included American systems that could be of help to Europe (cruise missiles). At the time of the Chancellor's speech, the precise details of the emerging SALT II Treaty (following the rejection by the Soviet Union of President Carter's "heavy cuts" proposal of March 1977) were not known. However, European officials were concerned that the new treaty would include restrictions on cruise missiles that would effectively deny their utilisation in Europe. However, the speech did not make clear how the disparities to which the Chancellor referred were to be removed. He commented that if they remained, then the Alliance "must maintain the full balance of deterrence strategy . . . and must therefore be ready to make available the means to support its current strategy." But referring to the Vienna MBFR negotiations, he said that there were two ways of establishing a conventional balance with the Warsaw Pact—for NATO to undertake a build-up or for NATO and the Warsaw Pact to reduce their force strength and achieve an overall balance at a lower level. The Chancellor stated that he preferred the latter approach.

19. The Chancellor's speech gave political momentum to a process that was already underway. NATO had already decided to review its TNF and had established the HLG for that purpose. During its first meeting, the HLG decided—at the urgings of the European representatives—that the long-range component of NATO TNF needed attention. They agreed fairly rapidly that new deployments would be neces-

sary and the United States was asked to provide "hardware" options by early 1979, a consensus was obtained on the need for a mix of Pershing ballistic missiles and ground-launched cruise missiles. The precise number of 572 systems was decided in the summer of 1979.

20. Alliance officials present the rationale for LRTNF modernisation as resulting from the coincidence of three separate but related developments: strategic parity, existing NATO LRTNF obsolescence and Soviet LRTNF modernisation. It is argued that the development of strategic parity as codified by the SALT process has raised questions concerning the credibility of the American strategic nuclear forces to defend Europe. The credibility of the American nuclear deterrent vis-a-vis Europe has been further diminished by the declining effectiveness of existing NATO long-range nuclear assets in Europe, notably American F–111 and British Vulcan aircraft, whose penetration capability has been put in doubt by improvements to Soviet air defences and by their own obsolescence. It is also argued that because the 400 Poseidon warheads allocated to NATO are part of America's strategic forces, they are not sufficiently identified with, or linked to, the defence of Europe. Neither do their characteristics facilitate their use for the selective response that NATO strategy requires. These deficiencies in NATO's forces contrast with the very substantial improvements in Soviet LRTNF capabilities targeted on Europe, notably the introduction of the SS–20 and the Backfire bomber.

21. As a result of these related developments, Alliance officials argue that NATO's strategy of flexible response has become deficient. A gap has become evident in the area of long-range theatre nuclear systems which the Soviet Union could exploit. During a crisis, Soviet LRTNF capabilities could provide the Soviet Union with the means to escalate to a level at which NATO has no credible response, because both NATO's existing LRTNF and the threat of American strategic retaliation lack credibility.

22. The HLG's deliberations initially concerned the deficiencies of NATO's own capabilities. However, in the public discussion, attention increasingly focussed on the SS–20. A number of observers argue that the SS–20 poses a qualitatively different threat to Europe in the sense that it can threaten European military targets with greater accuracy and reduced collateral damage. It affords the Soviet Union more selective and thus more credible options against Europe. Moreover, because of its mobility, it is no longer targetable by American strategic systems as were the fixed silo SS–4s and SS–5s. Accordingly, the SS–20 gives the Soviet Union the potential to initiate nuclear strikes against NATO's nuclear and military forces which it previously lacked. The SS–20 constitutes a military threat which could be used in a time of crisis for political intimidation. However, other observers have disputed that the SS–20 alters the military balance in any practical way. They point out that because of the size of the warhead (550 KT), a selective strike against Europe would cause appalling damage, no matter what the accuracy, and inevitably initiate a more general nuclear conflict. Under these conditions, it is difficult to understand how this new capability would give the Soviet Union a usable weapon, either in a military or political sense.

23. The public debate emphasised the SS–20 to the exclusion of other arguments and weapons systems. The over-emphasis on the

SS–20 was perhaps inevitable because it is easier to discuss publicly the need for LRTNF modernisation by pointing to visible Soviet capabilities than by explaining somewhat esoteric NATO doctrine. However, while understandable, this emphasis has contributed to some of the current ambiguity concerning the precise objectives of the NATO decision.

24. While the reasons advanced to justify the need for LRTNF modernisation involved military criteria, the evolution of the NATO decision was also influenced heavily by political considerations, notably that deployments should be land-based and visible to ensure coupling between the United States and Europe;[3] that the numbers should be high enough to ensure the credibility of flexibility response, but not so high as to suggest a self-contained theatre nuclear capability; that the Federal Republic should not be the only non-nuclear continental member to accept deployments;[4] and that a deployment proposal must be accompanied by an offer to begin arms control negotiations. The NATO 12th December double track decision represented an attempt to accommodate the requirements of NATO's policy of defence and détente. This attempt to balance military and political considerations pervades the entire LRTNF debate, particularly concerning the role of arms control and the relative priority to be accorded to modernisation and arms control.

25. In his speech to the IISS, Chancellor Schmidt referred to modernisation and arms control as alternative methods for removing the disparities of power. In the evolution of the LRTNF decision, NATO adopted both approaches as parallel and complementary. The NATO Communique states that:

> "A modernisation decision including commitments to deployments is necessary to meet NATO's deterrence and defence needs, to provide a credible response to unilateral Soviet deployments and to provide the foundation for the pursuit of serious negotiations on TNF . . . NATO's TNF requirements will be examined in the light of concrete results reached through negotiations."

The double track decision therefore links the two approaches together; modernisation provides the foundation for arms control, but arms control can modify the magnitude of modernisation.

26. While theoretically clear, the precise relationship between arms control and modernisation remains ambiguous and consequently uncertainties exist concerning the precise objectives of the NATO decision. To be precise, what degree of modernisation is necessary and to what extent should this be influenced by SS–20 deployments? This uncertainty reflects different perceptions of the cause of the problem and hence its solution. Put simply, if the main cause of the gap is a deficiency in NATO's own capabilities, then modernisation is necessary irrespective of Soviet developments, but if the principal cause is SS–20 deployments, then in theory, arms control could provide the solution through reductions. Because of differences

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[3] There were also technical and military reasons for preferring land-based deployments, but the political coupling argument predominated. (See paragraph 40–45 for discussion of the sea-based option).

[4] The Federal Republic established a number of criteria for her participation, notably, the non-singularity principle.

concerning the perceived cause of the problem, variations exist in national capitals concerning the appropriate emphasis to be placed on the respective components of the dual decision.

27. During meetings with the Special Committee in Bonn, German officials tended to stress the need for LRTNF as a response to the SS-20. In the words of one official:

> "If it is true that the NATO decision was a reaction to the Soviet build-up, then if that build-up were to disappear, you would not need to follow through."

German officials stressed the importance of making Soviet modernisation the prime reason for the NATO decision:

> "It is important to make it known to the Russians that they are the source of the problem that we have and we would not need a two-track decision had it not been for their build-up."

If the Soviet Union had no LRTNF, then there would be no need for Allies LRTNF:

> "If we achieved zero SS-20, zero SS-4 and zero SS-5, existing NATO forces, carrier-based aircraft, for instance, would be sufficient again. We could live with zero deployments under these conditions."

The officials acknowledged that this would leave the problem of improved Soviet air defences, but said this problem could be solved by modernising existing aircraft.

28. British officials, on the other hand, emphasised the need for modernisation as a function of the deficiencies of flexible response. NATO doctrine requires the capability to strike the Soviet Union with systems based in Europe. Existing capabilities, all based in the United Kingdom, were aging and were in need of replacement. Modernisation was required irrespective of developments in Soviet capabilities. The SS-20 was not essential to this argument though its deployment made the case stronger.

29. American officials stressed the doctrinal requirement for LRTNF, but the views of some officials indicated a more demanding role for LRTNF than the one required by their European counterparts. These officials argue that NATO should have TNF capabilities for a wider range of contingencies than that of a selective response. In their opinion, LRTNF are military assets which must have a demonstrative military use to be credible. They believe that LRTNF constitute warfighting capabilities rather than political signalling assets as many Europeans tend to perceive them.

30. Some American officials also emphasised the relationship of LRTNF to the SS-20, but for rather different reasons. They stressed that the extent and rate of SS-20 deployments was well beyond the original projections made in 1979. For this reason, a new threat assessment was being carried out. The implication was that NATO could possibly do with more than 572, but certainly no less.[5]

31. At the official level, these variations are of interest mainly for the light they throw on the different perceptions of the need for

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[5] For further discussion see paragraphs 33-36 on the choice of 572.

LRTNF modernisation and on the objectives of the NATO decision. They do not reflect any divergence from the general principles of the dual-track decision, but they could eventually lead to differences over the precise number of LRTNF NATO actually requires in the light of Soviet deployments and arms control negotiations.

32. At the public level, the ambiguity of the precise objectives of the NATO decision has led to a degree of misunderstanding. The integral relationship between modernisation and arms control has not been clearly understood. In some countries, the emphasis on arms control may have created the impression that negotiations can solve the problem of deployments.[6]

THE CHOICE OF 572

33. Because a convincing explanation had never been publicised concerning how the Alliance arrived at the number 572, it was a matter of some concern for the Special Committee. While it is difficult to justify any precise figure, the number was not as arbitrary as some have suggested. In their deliberations, the High Level Group considered a range of options and decided that 200–600 offered the most appropriate possibilities. According to officials, the precise number of 572 was derived from a series of military-political requirements including the following considerations:

—The new systems were chosen to enhance deterrence by providing NATO with the capability to respond to a nuclear attack short of a general strategic exchange, and by replacing the aging systems—F-III and Vulcans—which currently fulfil these requirements.

—To meet the requirements for deterrence and for flexible response, there had to be a sufficient number of systems capable of surviving a possible pre-emptive attack, particularly in view of improving Soviet capabilities.

—For the same reason, the number had to be large enough to penetrate Soviet air defences.

—There had to be a wide geographical spread of the systems, that is, the systems had to be spread from north to south throughout the countries of the Alliance to complicate Soviet military planning. An equally important consideration was the concept of sharing the nuclear risk among Alliance members.

—The number had to be large enough to constitute a political response by NATO. This would also encourage the Soviet Union to enter seriously into arms control negotiations.

—The number was large enough to provide a margin for reductions through arms control negotiations.

—However, the number could not be too large, or it would appear to constitute a separate theatre nuclear capability.

—The size of the Soviet modernisation programme also implied the need for a high number on the 200–600 scale. However, it was emphatically stressed that the number 572 was not considered as countering the SS-20 weapon for weapon.

—Concerning the mix of the two systems, their characteristics offer flexibility to NATO and maximise the difficulties for Soviet planners. It was a political-military decision that Pershing II would be as similar as possible to Pershing IAs and will only be installed where Pershing IAs[7] are currently deployed. Pershing II is thus considered a replacement and modernisation. At present, the Soviet Union has no effective defence against the cruise missiles, and while the Soviets could feasibly build an adequate air defence in the future, American officials estimate it would cost in the range of $50 billion.

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[6] For further discussion see paragraphs 69–71 on the "zero option."

However, differences exist concerning the precise number of LRTNF NATO requires to satisfy flexible response. German officials noted that on at least two counts, the number could have been smaller: firstly, as replacements for existing systems fewer than 572 would have accomplished the presently assigned tasks; secondly, NATO's requirement of deliberate escalation would not require as many as 572. According to one German official:

> "I can envisage no situation to release 572 warheads of this type and call this act a deliberate and selective escalation. For my understanding, for deliberate escalation we can live with a much smaller number than 572".

34. By way of contrast, a number of American officials see the number of 572 as a base rather than a ceiling. Their views rest on the assumption that NATO needs credible theatre nuclear capabilities and that requirements should be decided on military rather than political grounds. This position was articulated by Congressman Whitehurst during a presentation to the Military Committee in Venice in May. Congressman Whitehurst commented that it was clear that no allowance for actual theatre exchange and resultant system casualties entered into the LRTNF calculations. He argued that the quantity of 572 is insufficient to accept pre-launch attrition and still carry out counter-force missions. The militarily appropriate quantities are two or three times higher than the 572 agreed to by the ministers. The appropriate number of GLCMs and Pershing IIs can really be determined only by an operational warfighting rationale and doctrine that NATO lacks.

35. As a result of the accelerated pace of Soviet SS–20 deployment, the HLG was mandated at the Rome Ministerial Meeting to produce two studies, a new threat assessment of LRTNF and NATO's functional requirements. It is not clear whether or not this is meant to provide a new basis for a re-evaluation of the 572. European officials indicated that an increase of systems to be deployed was out of the question. However, the question of NATO needing more rather than fewer missiles was alluded to during the Special Committee's meeting in Washington. Commenting that the extent and pace of Soviet modernisation was beyond the 1979 predictions, one American official said, "we may have to face the fact that numbers will go up rather than down if negotiations do not work".

36. However, a senior American official subsequently informed the Special Committee that he could see no possibility in a political sense that NATO would increase the number of 572 warheads. This

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[7] Only the Pershing IAs with American forces will be replaced by the extended range Pershing II. The shorter range Pershing IA with German forces (under dual key) will remain. A short-range Pershing II is under development.

was not to say that if the Soviet Union mounted a great challenge i.e. thousands of missiles, NATO would not respond, but in the foreseeable future there would be no change in the agreed number.

THE CURRENT STATUS OF IMPLEMENTATION

37. Of the countries selected for deployment, the Netherlands and Belgium reserved their decision pending progress in arms control negotiations. The Netherlands' government stated that a decision on deployment would be taken in December 1981. The Belgian government at the time of the decision said that it would confirm the application of the decision to Belgian territory within six months. The most recent Belgian statement, coming after some conflict within the Government, says that it will examine the state and progress of the negotiations every six months and will draw the necessary conclusions in the context of the Alliance. United Kingdom officials have said that preparations are well under way at the prospective bases of Molesworth and Greenham Common. Italy has recently announced that Comiso in Sicily will be its cruise missile base. The sites in the Federal Republic of Germany have yet to be announced.

38. Officials were unwilling to speculate on whether a redistribution of quotas would be possible in the event that one or more of the selected countries refused deployment. German officials drew attention to their condition of non-singularity. They stated that a negative decision by either the Netherlands or Belgium would undoubtedly influence the public debate in Germany, and that a change of position by Italy would necessitate a reassessment of the decision.

39. The systems are proceeding under development. A recent General Accounting Office (GAO) Report [8] noted that several problems need to be resolved if both are to meet their performance and deployment objectives. The Report notes that there is a high degree of concurrency between research and development and production of Pershing II and GLCMs, though American officials have commented that this is not unusual. The Report also notes a slip in the GLCM test schedule because of software problems. The American Defence Department has disagreed that there is a high degree of concurrency or risk in the programmes and believes that deployment schedules will be met.

THE SEA-BASED OPTION

40. Increasing public opposition to the deployment of land-based missiles has led to a resurgence of interest in the possibility of deploying new systems at sea. The Special Committee learned that at the time the NATO long-range TNF modernisation decision was under consideration, the High Level Group gave serious thought to the so-called sea-basing option, that is, modernisation through the use of sea-launched cruise missiles (SLCM), rather than ground-launched cruise missiles (GLCM). According to German officials, Chancellor Schmidt pressed the HLG to study the possibility of sea-basing as a means of increasing participation. The sea-based option was analysed as part of a possible LRTNF package and was rejected

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[8] "Most critical testing still lies ahead for the missiles in theatre nuclear modernisation programme". GAO, 5th March, 1981.

for several reasons. The HLG concluded that there were military and political advantages to the GLCM unavailable in the SLCM.

41. The most prominent reason for preferring land to sea-basing combined both military and political factors: it was the perception that the deterrent effect of land-based missiles is higher. Missiles based on European territory are physically and unambiguously identified with European defence. They "couple" Europe and the United States in an unmistakable fashion. A Soviet leader would be left in no doubt that a nuclear attack on Europe would be met by a nuclear response by the Alliance. Soviet territory would not be a sanctuary.

42. Among the other arguments against the SLCM were the following:

—It did not satisfy NATO's military requirements as effectively as land-based. Land-based missiles would permit deliberate escalation and selective use, sea-based missiles would not facilitate the same flexibility nor responsiveness.

—Sea-basing would have raised problems of command and control and a range of problems concerning participation. With GLCMs, the battery commander is obviously only an American, but with the SLCM, the situation would be more complex. If the force were United States ships only, they would be seen as an extension of American strategic forces. If they were Allied ships with a United States control unit, problems similar to those that faced the Alliance during the Multilateral Force (MLF) decision in the 1960's and were unresolved, would re-emerge.

—Deployment of missiles on existing platforms would have led to operational complications. Moreover, the primary roles of the ships and submarines in Alliance navies would be changed and diminished with the introduction of the SLCM, creating new problems for the Western navies. On the other hand, the building of new dedicated platforms would have increased the cost of the modernisation programme.

—Range deficiencies would have prohibited the deployment of Pershings at sea, which, under the selected mix of systems, would have left the Federal Republic in a singular position—the only country to have land-based missiles.

—Sea-basing would have also caused political problems in the sense that missile-carrying ships could be the cause of political protest. This would be an enduring problem compared with the issue of land-basing. It was argued that opposition to land-basing would dissipate once the missiles had been deployed.

—Sea-basing was perceived by some officials as a way of avoiding risk-sharing, whereas land-based systems clearly involved risk-sharing.

—Sea-basing would have greatly complicated arms control negotiations.

43. The Special Committee was informed that there was no Alliance support for the sea-based option. Opposition to a re-examination of the SLCM remains based on the political and military disadvantages. But it is reinforced by the determination to maintain the cohesion of the NATO decision. Even those who were originally sceptical of the LRTNF modernisation decision and would have certainly preferred sea-basing are now opposed to a revival of the concept

because of its damaging implications for the dual-track decision. For these people, the principal objective is to secure arms control negotiations, and they believe that the best prospects for negotiations lie in adhering to the dual-track decision. In this respect, it is felt that opponents of the NATO decision are now arguing the case for sea-based systems because they realise that any deviation from the present position would undermine the 12th December decision.

44. The United States is planning a substantial expansion of its cruise missile programme. Press reports note that the Navy plans to deploy between 3,000 and 4,000 anti-ship and land attack cruise missiles with ranges of between 700 and 1,100 miles on surface ships and submarines. A 1983 date has been set for initial deployment. So far, only conventional warheads are planned but a nuclear warhead version is under consideration.

45. During the Special Committee's visit to Washington, an American official stated that he would not rule out augmenting the NATO land-based force with sea-based missiles if necessary.

THE CURRENT WORK OF THE HIGH LEVEL GROUP (HLG)

46. The HLG is now reviewing other aspects of NATO's TNF. In particular, it is examining the precise nature, scope and basis of the adjustments required by LRTNF deployments, as well as the possible implications for the balance of roles and systems in NATO's nuclear armoury as a whole. Since it was agreed that modernisation should not produce any change in the overall total of nuclear weapons in Europe, 572 warheads will have to be withdrawn from NATO's inventory to accommodate the new LRTNF. This is in addition to the 1,000 warheads unilaterally withdrawn as part of the 12th December decision. The HLG is therefore examining on a step-by-step basis the nuclear systems currently deployed in Europe to see which ones could be removed. This process appears to correspond to the so-called "shift study." A number of European countries, in particular the Netherlands, proposed that NATO should use the issue of LRTNF deployments to initiate a shift in its nuclear weaponry away from the present concentration on short-range systems. Questioned by the Special Committee on this concept, American officials were reluctant to use the term "shift" as it prejudged the conclusion of any study. In the words of one official, the answer could be "no shift" or "more of the same." With regard to the battlefield element in NATO's TNF, American officials stressed the comprehensive nature of Soviet TNF modernisation. They pointed out that the Soviet Union was already deploying substantially improved short-range systems without any parallel response from NATO.

47. In meetings with officials and members of parliament, the need for a review of NATO's requirements for tactical and battlefield nuclear weapon systems was frequently stressed. It was thought that NATO could very probably maintain deterrence even with the removal of some of these systems.

AMERICAN NUCLEAR POLICY

48. The change of American leadership in Washington has had a number of implications for the modernisation programme and for future nuclear planning within the Alliance, particularly American

strategic plans and the Administration's view of Alliance nuclear planning.[9]

49. President Reagan has determined that America's military forces must be considerably strengthened in order to reverse what is perceived as a decline in American power relative to the Soviet Union. His plans include substantial improvements to America's strategic forces. Two elements of these plans have given rise to comment in Europe and in the United States—the potential development and deployment of the MX missiles and the planned deployment of large numbers of cruise missiles at sea.

50. Plans to develop and deploy the MX mobile missile have encountered very substantial opposition from residents in the prospective basing states of Utah and Nevada. As a result, the Secretary of Defence has recently authorised a major review of the options available to the United States to solve the problem of land-based vulnerability. The parallel between opposition to the deployment of MX in Utah and Nevada, and land-based missiles on European territory has been noted by the movements in Europe opposed to deployments and used to strengthen their case.

51. American plans to deploy large numbers of cruise missiles on surface ships and submarines has also had consequences in Europe. It has refocussed attention on sea-basing as a possible option for NATO, and it has led to the observation that the tremendous expansion of cruise missiles makes NATO's 572 warheads somewhat insignificant and perhaps redundant.

NUCLEAR PLANNING

52. Before the formation of the HLG, the United States had traditionally played a dominant role in the Nuclear Planning Group in the evolution of Alliance nuclear policy. The United States initiated and directed procurement policy while keeping the Allies informed and consulting on deployment through the Nuclear Planning Group (NPG). However, the formation of the HLG facilitated a more prominent role for the Europeans. They contributed to the evolution of the rationale for LRTNF and to the characteristics of the procurement decision itself. This degree of participation inevitably entailed taking account of European sensibilities on a number of issues—German non-singularity, the emphasis on arms control etc.

53. During the Special Committee's visit to Washington, Reagan administration officials indicated that they felt the Carter administration had gone too far in abdicating American leadership in Alliance nuclear policy. In their view, European sensibilities had been accommodated to an excessive extent with the result that a necessary modernisation decision had been made conditional on arms control negotiations, the objectives of which had not been thought through. The view was expressed by some officials that under this Administration, the United States would reassert its position vis-à-vis nuclear policy for the Alliance. Nuclear procurement decisions would be treated as matters of unilateral American concern, while consultation with the Allies would naturally take place concerning deployment.

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[9] The most significant consequence of the change in Administration—the policy towards arms control negotiations—is discussed in the section on the Special Consultative Group.

This policy appears to have been followed in the latest decision concerning production of the Enhanced Radiation Warhead (ERW). However, this approach creates an artificial distinction that could undermine the principle of Alliance consultation on policies of immediate relevance to the security of Western Europe.

CHAPTER III—ARMS CONTROL

54. In the autumn of 1978, several governments expressed concern that NATO was concentrating on a "hardware" solution to the LRTNF problem and ignoring arms control considerations, without which public support for modernisation would be difficult to obtain. Accordingly, in April 1979, NATO established a Special Group (SG) to examine the arms control implications of an LRTNF decision in parallel with the work of the HLG. The SG, like the HLG, was staffed from national capitals and chaired by the United States.

55. The SG established a number of guidelines, the most important being these: the work of the HLG constituted the basic point of reference for the SG; arms control negotiations would be neither realistic nor possible without an agreed modernisation plan and a decision to implement it; LRTNF negotiations should be conducted within a SALT III framework; and the negotiations should ensure de jure equality in ceilings and in rights.

56. By the autumn of 1979, the SG had established a general negotiating framework. The central feature of this position was that negotiations should focus on the Soviet land-based missile force as the most immediate threat and attempt to reduce this force by limiting SS–20 deployment and ensuring the retirement of the SS–4s and SS–5s.

57. The NATO 12th December decision combined an agreement to modernise with the recommendation that arms control negotiations between the United States and the Soviet Union should begin as soon as possible. However, a variety of factors (the Soviet invasion of Afghanistan, the shelving of SALT II, and the hostile Soviet reaction to the NATO decision) prevented any progress being made in the arms control field. A speech by President Brezhnev on 6th October, 1979 had contained an offer to negotiate on LRTNF on condition NATO did not take its decision to modernise. NATO rejected this as a propaganda effort to halt the modernisation decision and ensure division within the Alliance. Soviet officials then stated that the 12th December decision had cancelled the basis for negotiation and for six months the Soviet Union refused the possibility of negotiations. Following Chancellor Schmidt's visit to Moscow in June 1980, the Soviet Union dropped their precondition that NATO rescind its 12th December decision, and, despite the non-ratification of SALT II, agreed that preliminary discussions on limiting medium-range systems could begin. However, the Soviets took the position that American forward-based systems (FBS) should be included in the negotiations and stated that no agreement or treaty could be implemented before the ratification of SALT II.

58. The first round of these preliminary discussions on LRTNF negotiations was held in Geneva in October 1980, but were terminated because of the American elections.

59. President Brezhnev made a further initiative with his proposal of a moratorium on the deployment of medium-range missiles, a suggestion rejected by NATO defence ministers because it would not address the fundamental problems caused by the momentous build-up of Soviet arms, particularly LRTNF.

60. For a substantial period, considerable uncertainty existed concerning the attitude of the Reagan administration towards the arms control component of the double-track decision. However, during the May meeting of the NATO foreign ministers in Rome, Secretary Haig announced that the United States would commence LRTNF negotiations with the Soviet Union before the end of the year. This commencement and certain other actions by the Administration, such as endorsement of the Conference on European Disarmament as part of the CSCE process, has gone some way to allay European anxieties concerning the American commitment to LRTNF negotiations.

61. However, for a number of reasons, European concern over the prospects for LRTNF arms control has not fully subsided: firstly, the negotiations are in themselves extremely complex since the initial negotiating positions of the two sides are far apart; secondly, during meetings with the Special Committee, American officials were not optimistic over the prospects for negotiations; thirdly, it is generally recognised that LRTNF negotiations cannot proceed very far without knowing the SALT context. American officials have announced that a position on SALT will not appear until 1982. In the meantime, they have stated several elements that will form part of their negotiating procedure: greater military strength to exact leverage, a stricter policy of linkage, and more effective verification procedures. American officials emphasise that they are willing to talk to the Soviet Union and that a number of contacts at various levels have already been made. In the words of an American official: "It is not that we are not talking, it is that they do not like what they hear." European officials have welcomed American statements concerning their willingness to commence LRTNF negotiations.

62. European officials welcomed the American statement on commencing LRTNF negotiations. But they expressed some disquiet at the prevailing sentiment in Washington on the utility of arms control. Commenting on the disenchantment with arms control in the United States, one German official said:

> "This development has not taken place in Europe because in Europe we have never regarded arms control as an alternative to deterrence. Our less Quixotic view of arms control has enabled us to maintain continuity in that view. It is in our interest to continue arms control as a realistic and practical process."

Similarly, a British official commented that arms control should not be a search for unilateral advantage but for greater stability. A framework for stability is essential for the competitive situation in which we live.

63. European officials generally agreed that too close a linkage between arms control efforts and Soviet international behaviour was unproductive and unwise, and were thus hesitant about the approach of the Reagan administration in this regard. The European

view is generally that arms control negotiations and treaties must serve security. They are not a substitute for defence, but an integral part of security. For these reasons, as one United Kingdom official said, they should not be considered "the donkey to carry the full burden of East-West relations." At the same time, it is widely recognised that an extreme action by either party, for instance, Soviet intervention in Poland, would have an immediate impact on any negotiations. Such extreme actions, however, should be distinguished from other international behaviour, according to most European officials. As an essential component of security, arms control efforts leave little room for rewarding the good and punishing the bad.

64. European observers and officials alike expressed the almost unanimous view that the non-ratification of SALT II had had a profound effect on public opinion in Europe. It had been a major factor in the growth of opposition to the NATO decision and the rise of the anti-nuclear movements. European public opinion had found it difficult to understand that a treaty that had been evolved under four administrations could suddenly be dismissed as fatally flawed and contrary to the interests of the Alliance. American interest and willingness to negotiate arms control is considered essential to Alliance security and specifically to the implementation of the NATO LRTNF decision.

65. The NATO framework for LRTNF negotiations remains the one originally agreed by the Special Group. Co-ordination continues to be managed through this group now known as the Special Consultative Group (SCG) and chaired by Assistant Secretary of State Lawrence Engleburger. The main points of the NATO position as outlined by Alliance officials are: the negotiations should be bilateral; they will be global in context (in other words, including all Soviet LRTNF, not just those in the European part of the Soviet Union); primary concentration will be on land-based missiles, aircraft would be considered at a later stage; the principle of equality both in ceilings and rights must be established; the counting method will be warheads on launchers; the negotiations will be in the SALT framework; British and French systems will be excluded.

66. It is not yet clear whether the basic negotiating position agreed by the Special Group and the NATO ministers in 1979 will be modified in the light of the new threat assessment and the current emphasis by the new Administration on the comprehensive nature of the Soviet TNF threat. A United States official, referring to the broader nature of the problem stated that "our negotiating approach needs to take them into account."

67. Administration officials have emphasised that in proceeding with LRTNF negotiations, they will seek the closest possible solution with their Allies. A senior American official told the Special Committee that "these negotiations intimately affect you and we need to hear your views . . . we will not enter into negotiations without hearing what you think." Noting that in the final analysis LRTNF negotiations are a United States/Soviet Union bilateral affair and that, therefore, there may be Allied points of view the United States cannot accept, he nevertheless added "my instructions are to take them into account."

68. While the preliminary discussions in Geneva in October 1980 were short-lived, they permitted American negotiators to learn some details of the Soviet approach. The Soviet negotiators has initially adopted a very general approach which became more specific as the talks progressed. The Soviet position was that when all principal nuclear arms in Europe were taken into account, a general balance existed. They mentioned a broad range of NATO's nuclear capabilities as being relevant to the general balance. Their objective appeared to be to freeze this balance at existing levels. Their negotiating position was based on a "freedom to mix" and they proposed launchers as the unit of account. Alliance officials have expressed opposition to any attempt to broaden the scope of the negotiations since this would unnecessarily complicate them and make immediate progress unlikely.

69. The main discrepancy the Special Committee encountered concerned the objectives of the arms control approach and the so-called "zero option." The "zero option" refers to the theoretical, but admittedly highly unlikely possibility, that the Soviet Union would reduce all its long-range land-based missile forces. In this case, a number of German officials stated that NATO would not need to modernise—an argument which runs counter to the rationale that NATO needs new LRTNF deployments irrespective of Soviet developments. However, the objective of recognising the "zero option" as a desirable but implausible goal is to place the responsibility for NATO modernisation on the Soviet Union. NATO is saying that it will establish parity as low as the Soviet Union wishes, even to zero. As a German official stated: "zero growth is only a theoretical goal. But parity can be achieved as far down as the Soviets will permit."

70. A British official summed up the dilemma that the "zero option" represents by commenting that because the number of NATO deployments are not a function of Soviet capabilities, the "zero option" is a non-starter. However, he added that in the unlikely event that the Soviet Union was prepared to get rid of all its SS-20s, then NATO would be in a different position. In that case, "for political reasons, we could go for a zero option, but on political grounds, not strategic doctrine."

71. The "zero option" illustrates two problems inherent in linking arms control to modernisation: firstly, many observers believe it is a mistake to make NATO deployments dependent on Soviet action; secondly, the notion of the "zero option" raises public expectations that arms control can provide a solution and obviate the need for deployments.

CHAPTER IV—PROBLEMS AND PROSPECTS

72. Despite mounting domestic opposition in number of member countries to the deployment of new land-based missiles, most NATO governments are determined to maintain the 12th December consensus on the dual-track decision of modernisation and arms control. This determination is fuelled by several related considerations: the belief that the decision accurately reflects NATO's requirements; the belief that, irrespective of its merits, the NATO decision is vital for Alliance cohesion; and the belief that implementation of the decision offers the

only route to serious negotiations. The Soviet Union will only negotiate if it is convinced of NATO seriousness and solidarity.

73. Because of this determination, member governments are unwilling to reconsider any element of the NATO decision. This includes the seabasing option which was considered by the High Level Group and discarded for sound political and military reasons.

74. The ability of governments to maintain and carry through the NATO decision will without doubt be influenced by the perceived willingness of the United States to enter into negotiations with the Soviet Union on LRTNF. The Reagan administration has made a firm commitment to begin LRTNF negotiations with the Soviet Union by the end of the year. Alliance governments have welcomed this announcement, but public confidence in a successful outcome must be qualified by a number of considerations: progress in LRTNF negotiations will be extremely difficult since the negotiating approaches of either side are far apart; the Reagan administration has adopted a rigorous and exacting approach toward the role of arms control which may prove difficult to negotiate; the Administration's policy on SALT is still under review and a position is not expected before 1982. It is difficult to see how LRTNF negotiations can proceed far in the absence of an overall SALT framework.

75. While there is general agreement on the need to hold to the NATO decision, there are some differences concerning the precise objectives of the decision. These differences result from varying perceptions as to what caused the LRTNF gap and how it should be solved. The linking of modernisation and arms control was necessary in order to balance the military and political requirements of NATO's policy of defence and détente. But differences exist concerning which of the two parts should be accorded priority. In general, it can be said that Europe regards modernisation as the price to be paid for arms control, and the United States-arms control the price to be paid to achieve modernisation.

76. Several questions arise from the Special Committee's investigations: is modernisation necessary irrespective of Soviet deployments? How many LRTNF does NATO require? To what extent is this number related to Soviet deployments? How many of the 572 are negotiable?

77. The decision to produce a new threat assessment may also have implications for either part of the dual-track decision. Does the emphasis on the comprehensive nature of Soviet TNF modernisation programmes imply any change from the arms control position adopted by NATO on 12th December, 1979? Does it imply a further series of modernisation measures by NATO at the level of short-range systems?

78. The ambiguity concerning the objectives of the NATO decision is reflected in discussion of the "zero option." It is accepted that this is a political strategy to place responsibility for the level of deployments on the Soviet Union. However, the notion of a "zero option" contradicts the doctrinal requirement for deployment. More seriously, it raises public expectations that arms control can provide a permanent solution and obviate the need for deployments.

79. Full and timely consultation by the United States with its Allies will be essential for implementation of the LRTNF decision.

However, the determination of the Reagan administration to separate the production and deployment part of the nuclear weapons decisions, and to consult with the Allies only on the latter—as in the case of the recent ERW decision—is an artificial distinction that could undermine the principle of Alliance consultation.

PART II—A COUNTRY-BY-COUNTRY ANALYSIS

This section is intended to inform members of the situation regarding the NATO dual-track decision in those countries selected for deployments and of the range of national views held in these countries concerning this issue.

The country studies are based on the visits of the Special Committee to the Federal Republic of Germany, the United Kingdom and Belgium, members' contributions and staff research. They are not definitive and will be amended and up-dated to take account of developments and of members' views.

THE FEDERAL REPUBLIC OF GERMANY

80. The West German concern with the imbalance in theatre nuclear forces was instrumental in developing the TNF modernisation proposal, and German political criteria were extremely important in establishing the components of the NATO decision.

81. At the time of the NATO decision, the Government was composed of a coalition formed by the Social Democratic Party (SPD) and the Free Democratic Party (FDP).[10] In the development of the Government's position, Chancellor Helmut Schmidt was widely considered successful in blending the requirements for military security and the political requirements for good relations with Eastern Europe, or the requirements of détente. A significant section of the SPD tended to emphasise the need for negotiations more than for modernisation, while other elements of the SPD and the junior partners of the coalition, the FDP, emphasised the need for modernisation to offset a growing imbalance and threat. The Chancellor's success in achieving widespread and strong support for the dual-track proposal lay in recognising the strong feeling within the SPD that every effort be made to safeguard relations with the East and that arms control efforts be at least equally emphasised. At the 1979 SPD Congress, he received a clear mandate for the Government's position, and his resounding personal success was demonstrated in the vote by which he was elected Party Chairman—360 in favour, 24 opposed and 16 abstentions.

82. The Free Democratic Party (FDP), particularly through Foreign Minister Genscher, tended to place a higher priority on the necessity to modernise in order to offset the growing TNF imbalance. In Genscher's view, the Soviet Union bore responsibility for any TNF arms competition.

83. The opposition parties, the Christian Democratic Union (CDU) and the Christian Social Union (CSU) supported the Government's

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[10] The composition of the Bundestag 1976–1980 was as follows: SPD—224 members (including 10 members from Berlin); FDP—40 members (including 1 member from Berlin); CDU/CSU—253 members (including 11 members from Berlin); Independent—1 member.

position on the NATO proposal, but, more strongly than the governing coalition, emphasised the need for NATO to modernise in response to the Soviet buildup. The official CDU/CSU position has long been that it would be ideal if all European Allies accepted direct participation in the modernisation programme, but it still considered the proposal sound, if only some Allies accepted. Further, the CDU does not accept the Chancellor's position that the Federal Republic could never be the only Ally to accept deployment and has viewed with some concern the tendency in the Left wing of the SPD to accent arms control over modernisation.

84. The October 1980 elections in the Federal Republic of Germany returned the SPD/FDP coalition to government.[11] Since those elections and the November election of President Reagan in the United States, opposition to the deployment of Pershing II and cruise missiles on German territory has grown. Spokesmen for the CDU/CSU maintain this growth has occurred only within the Left spectrum of the political forces and of public opinion, and not in the Federal Republic generally. No doubt the growth of opposition arises in part from the failure of the American Senate to ratify SALT II and the relative unimportance President Reagan appeared to attach to arms control negotiations in the first few months of his Administration. The fact that it would be months before the Reagan administration completed its policy review of the SALT process and its strategic requirements; that key policy-making positions in the Department of Defence and in the Arms Control and Disarmament Agency were filled slowly; that American spokesmen at meetings of the SCG in Brussels and at the NPG meeting in Bonn were at first reluctant to suggest a date, in terms however vague, for an opening of negotiations on LRTNF; that the Reagan administration was linking arms control negotiations to Soviet behaviour toward Poland in a manner more direct than European governments felt they could support—all these developments eroded the confidence that the negotiating track of the NATO 1979 two-track decision would be implemented. It was the credibility of the American commitment to arms control negotiations that was damaged in the early months.

85. The CDU/CSU sees the growth of this opposition differently. According to one spokesman, it was Moscow's propaganda, supported by the German Communist Party and its affiliates, that became more influential during this period by exploiting "misperceptions of President Reagan's policy and the illusions on détente still persisting, despite Afghanistan and Poland". Furthermore, it maintains that doubts about the credibility of the Reagan administration's commitment to the LRTNF negotiations were also stirred up by leaders of the SPD Left wing and by SPD/FDP youth organisations. The CDU/CSU holds that opponents constitute a small minority—albeit vociferous and with easy access to the mass media—and that the huge majority in the Federal Republic is still confident of American credibility. The CDU/CSU, the strongest political party, supports the NATO dual-track decision and adherence to the Alliance unanimously.

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[11] Since the October 1980 elections, the Bundestag composition has been the following: SPD—228 members (including 10 members from Berlin); FDP—54 members (including 1 member from Berlin); CDU/CSU—237 members (including 11 members from Berlin).

86. For those who were doubting, the credibility of the American commitment to negotiate has been somewhat restored through a series of developments. Perhaps the most important development was the May ministerial meeting in Rome and its final Communiqué, in which the importance attached to both tracks of the decision was reiterated and it was announced that LRTNF negotiations with the Soviet Union would open before the end of the year. Other statements by American officials, including a letter in July from President Reagan to Chancellor Schmidt expressing American commitment to open negotiations before the end of the year, and Secretary of State Haig's announced meeting with the Soviet Foreign Minister, Andrei Gromyko, in New York in September, as well as the successive meetings during the summer of the HLG and the SCG, have served to reinforce the credibility of the American commitment.

87. Chancellor Schmidt has attempted to keep the Left wing of the Party supportive of the 1979 decision, but it has been a difficult and apparently not always successful effort. In the early months of 1981, when the possibility even for opening LRTNF negotiations appeared remote, the SPD Left wing was increasingly restive and vocal, with several voices raising demands for a review of the dual-track decision.

88. Adding to this growing restiveness was the proposal by President Brezhnev at the 26th Party Congress in February for a moratorium on nuclear weapons deployment—a proposal NATO quickly rejected as propagandist, designed to freeze Soviet superiority and to drive a wedge into the Alliance. In a Bundestag speech in early April 1981, the Chancellor used unusually harsh language to criticise the Soviet Union, referring to the Soviet weapons programmes in this way: "This massive military disproportion represents a massive political danger." In the very important vote following the Bundestag debate on the dual-track decision in late May, the Chancellor received a comfortable majority, including a large majority of the Left wing SPD, yet it was thought highly significant that five SPD deputies voted against the motion, six abstained and four expressed reservations. The Chancellor's position and the decision of NATO received a powerful thrust of support when the newly-elected French President, Francois Mitterand, solidly endorsed the German position at the Franco-German summit in Bonn in early July, emphasising the need to negotiate from a position of strength. The debate between the two tendencies within the SPD received an additional stimulus following the trip of Willy Brandt to Moscow in July. After carefully examining Mr. Brandt's claims that the Soviets were taking slightly newer positions on the LRTNF negotiations, the "zero option," and the proposed moratorium, Government spokesmen concluded that in fact the statements differed in no significant way from earlier Soviet positions.

89. The Government is evidently concerned about the growing strength of movements opposed to the dual-track decision. The opposition movement is fuelled from a number of sources, which this Report considers later. To these sources, however, was added another in August, namely the United States decision to continue production of the Enhanced Radiation Warhead (ERW), a nuclear warhead widely opposed in Europe in 1978. The United States decision to produce the warhead, though not to deploy it in Europe, revived the

earlier debate about the weapon and the opposition to it, and provided another target for the anti-nuclear opponents.

90. Outside the circle of the political parties, the anti-nuclear opposition is in the progress of organising. The anti-nuclear weapons movements gain some momentum from the far more powerful anti-nuclear power movements, but it is difficult to say how much. The Green Movement has embraced a programme with a strong pacifist element, calling for unilateral disarmament and a dissolution of both NATO and the Warsaw Pact. Early reports indicate the Green Movement lost some of its following when it took the new direction. The German Peace Society and War Resisters' Movement organised a series of anti-nuclear demonstrations in German towns in the late spring. The Krefield Appeal, calling for opposition to the deployment of LRTNF on German soil, continued to grow; by September, it was estimated that one million had signed the Appeal.[12] It was widely thought that the unilateral American decision to produce and stockpile the ERW without, however, deploying it, would intensify opposition to the deployment of Pershing II and cruise missiles in the Federal Republic.

91. Convinced of the course of action it has taken with NATO to ensure continued Western security by negotiating as low a limit as possible on LRTNF as negotiations with the Soviets will allow and by strengthening deterrence, Government officials have launched a public information programme and taken issue with the critique of opponents. Chancellor Schmidt addressed some of the main arguments of opponents in a television interview in early September. The Chancellor said that he could not take the Krefield Appeal seriously since it did not even mention Soviet LRTNF capabilities. He noted that 250 SS–20s were currently deployed and a new one was being deployed every five days, with the majority of them targeted on Europe. "Peace is not created," he said, "when one renders oneself defenceless against the armament or threat of another". He also stated that several supporters of the Krefield Appeal were members of the Communist Party and the Appeal was a "tool" of Soviet policy. "There is no word of criticism for the Soviet Union", he said. "This is very clearly a tool very pleasing to the Soviet leadership, very suited to them and treated by them in a friendly way." About the same time, Defence Minister Hans Apel was challenged at an SPD "Peace Forum" in Bonn, concerning an organisational chart alleging connections between the Soviet Communist Party and the Krefield Appeal. The Minister said with apologies that the document had been withdrawn from circulation because of some factual errors, but refused to have withdrawn another document attempting to establish ideological links between the Krefield Appeal and Soviet arguments.

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[12] The Krefield Appeal was announced on 16th November, 1980, during a peace forum in Krefield. According to a CDU/CSU spokesman this Appeal was evidently inspired during the meeting of a delegation of the German Peace Union (DFU) with the Soviet Committee of the World Peace Council, held in Moscow between 29th January and 4th February, 1980, and then manipulated by the German Communist Party and what he called its "fellow travellers," especially the "German Peace Union (DFU)," "Socialist German Workers Youth (SDAJ)" [The youth organisation of the Communist Party]; "the Marxist Student Union Spartakus (MSB)" and other organisations.

MEETINGS IN BONN

92. During its meetings in Bonn, 22nd–24th June, the Special Committee found a high degree of consensus among Government officials, the members of the three major political party formations (CDU/CSU, SPD, FDP) and the group of experts from the Forschungsinstitut der Deutschen Gesellschaft für Auswärtige Politik concerning the 1979 NATO dual-track decision. The following summary includes the salient points from those discussions.

93. There was a strong consensus among MP's officials and experts that the NATO 1979 dual-track decision was militarily and politically sound and important. Their support for the decision rests on the perceived differences between East and West LRTNF capabilities. With the growing consciousness of strategic nuclear parity, and with conventional forces under negotiations in MBFR, it became all the more apparent that there was a growing series of long and medium-range nuclear weapons systems subject to no negotiations. It was the growing imbalance in LRTNF that was particularly worrisome and raised questions about the adequacy of NATO's capabilities to implement the doctrine of flexible response. Therefore, there were certain military requirements to cope with the new military imbalance, a security requirement to bring these weapons systems under restrictions, and a recognition that the military requirement could feasibly be reduced by successful arms control negotiations.

94. There is some belief in official circles that the Soviet Union planned to use or could use its LRTNF superiority to decouple Europe from the United States. The Soviet long-range political aim is to create in Western Europe, step-by-step, a dependence on and fear of the Soviet Union, thus creating the conditions for intimidation and blackmail. The SS-20, then, is perceived as a potential political weapon that could be used by the Soviets to put pressure on the European Allies. The NATO dual-track decision was taken precisely to ensure that there could be no Euro-strategic superiority with possible decoupling effects in the perception of the Soviet Union.

95. The Soviets are clearly trying to undermine the 1979 NATO decision. It was said that the Soviets were using every avenue of the media available to undermine the NATO decision and to produce a division between the Europeans and the United States. The Soviet method was twofold: to talk and to posture on the one hand, as, for example, with the Brezhnev proposal for a moratorium that would freeze the TNF imbalance in the Soviet favour, and, on the other hand, to try to reverse the NATO decision by exploiting and creating divisions within the Alliance. A central method at the time of the meetings of the Special Committee was said to be the attempt to discredit the negotiating readiness of the United States.

96. Because the Soviet Union is now convinced that NATO will proceed to implement the 1979 modernisation decision if arms control negotiations are not successful, it has become interested in serious negotiations. Only a very firm Soviet belief in NATO unity has brought the Soviet Union to enter arms control negotiations—it should not be forgotten that the Soviet Union utterly refused to

negotiate for six months—and only the continued perception of Alliance solidarity will cause the Soviet Union to treat the LRTNF negotiations seriously. NATO should adhere to both aspects of the 1979 decision. Re-opening the discussion of the 1979 decision at any level would lead Moscow to believe that NATO is not firm, to exploit any division further, and would open the door for the Soviets to walk away from serious negotiations. Possible alternatives to the weapons systems chosen in 1979, such as the sea-based systems, should, therefore, be dismissed. The sea-basing option was studied carefully prior to the decision and rejected for good reasons. Moreover, it was argued that basing the weapons systems on land couples the Allies more closely and therefore has a higher deterrence value. Mention in the public debate about increased danger to the Federal Republic because of the addition of new targets makes little sense. Because the Federal Republic is already so heavily targeted, the new targets would only make a marginal difference. Reconsideration of the options, therefore, would be deleterious to the 1979 decision, creating conditions for a coalition between opponents and those favouring sea-based systems for technical reasons, and again undermining the possibility for fruitful arms control negotiations.

97. The negotiating forum for LRTNF has long been under study, in fact, well before the 1979 decision was taken. The German position which has the support of all four political party formations, is that these negotiations should be bilateral and global. There is a strong emphasis on the necessity that the negotiations be global, in order to preclude any possibility for strategic or psychological decoupling. It is evident as well that the Alliance must have closer consultations than previously, because of the political and military implications of basing the weapons in Europe. The formula, then, is bilateral negotiations with close Alliance consultations through the SCG.

98. The negotiating aims of the Alliance were, in large part, published as part of the 12th December Communiqué. The primary Alliance concern is to concentrate on the most threatening systems, namely, land-based missiles. Within the Alliance it has been agreed that the principle guiding the neogtiations will be equal ceilings for land-based systems, whether the negotiations concern warheads or launchers. Since the negotiations will focus on weapons systems not included so far in any arms control negotiations, the Poseidons already included under SALT II are automatically excluded. If the so-called "forward-based systems" of the Allies are included in the negotiations, so too must comparable Soviet systems.

99. The goal of the negotiations is limitations on both sides at the lowest possible level. De jure, there will be equal ceilings, that is, the United States and the Soviets will have the right to the same number of warheads, missiles or launchers established by the equal ceilings. However, the United States, in consultation with Allies, may choose not to exercise that right, concluding that defence and deterrence are adequately strong with a fewer number of systems than those to which they have a right. There is, therefore, no contradiction or tension between the goal of the HLG of closing the gap in the ladder of deterrence or strengthening the strategy of flexible response, and the SCG goal of achieving reductions at the lowest possible level, even including the "zero option." If indeed the Soviet Union were pre-

pared to dismantle all its SS-20s, the Alliance would not have to deploy Pershing IIs and cruise missiles, since the threat would be greatly reduced and could be handled by other means.

100. There was strong support for the "zero option" in the Federal Republic. While it was thought that the "zero option" remains a theoretical possibility and may be politically unrealistic, it was still considered important to maintain it as a possibility because of the strong political and military message it sends to the Soviet Union. The idea is to negotiate limitations on Soviet systems at the lowest possible level, as low as the Soviet Union is willing to go. In effect, the West is saying to the Soviet Union, "We are ready to go down as low as you want." However unlikely it is that the "zero option" will ever be implemented, therefore, it should not be precluded. It must be made clear that it is the Soviets who refuse to lower the number of systems, and it was thought useful to let it be known to the Soviets every 24 hours that they are responsible for the level.

101. LRTNF negotiations can begin before the American strategic review undertaken by the Reagan administration has been completed. At the same time, however, the LRTNF negotiations should be considered within the SALT framework as part of the East-West strategic framework, and while the Alliance has avoided a formal linkage between LRTNF negotiations and SALT II, the SALT framework is needed. The totality of nuclear systems must be kept in mind during negotiations. The central point is to avoid decoupling—strategically and psychologically. The effect of the SS–20 deployment could lead to decoupling, because the Soviet Union now has a higher degree of strategic flexibility against Europe. The basic thrust of the Alliance decision to modernise its TNF is to reinforce coupling, and thus preclude any possible regionalisation of strategic nuclear strategy. NATO must be approached in the negotiations as a political-military unity.

102. At the same time, the Western approach to these negotiations must be realistic. The negotiations will be long and hard in any case, and must never be perceived as a substitute for defence.

103. While the initial stages of the negotiations should focus on the SS–20 and the Backfire bomber, it is considered vitally important not to focus too narrowly on the SS–20, but to take into account the whole range of theatre and tactical nuclear weapons modernisation programmes the Soviets have underway. To some extent, the public debate has focussed too narrowly on the SS–20, overlooking those other significant developments of the Soviet nuclear forces. The Soviets are known to have shorter range nuclear missile systems under development, namely, the SS–21 and SS–23, and there is a possibility that the SS–21s would be deployed in East Germany. It is important that these new weapons systems be brought into negotiations as early as possible. In fact, concern was frequently expressed about the development of the SS–21 and SS–23, both of which could constitute a new threat for the Federal Republic.

104. Part of the public discussion in the Federal Republic of the 1979 decision, it was said, is guided by the underlying supposition that if only NATO got rid of nuclear weapons, stable East-West relations would be guaranteed. This approach shows little understanding of the deterrent value of nuclear weapons and of the international situation. The Soviets have given no indication that they

intend to get rid of nuclear weapons or hope to. Moreover, it is not at all clear that a non-nuclear relationship would be safer or more secure. In fact, governments might feel more free to use conventional military forces to attain political goals. It should not be forgotten, in the current debate, that the purpose of nuclear weapons is to deter.

105. The impression sometimes given in the public debate is that with the 1979 decision, NATO has increased its emphasis on the value of nuclear weapons. However, it should be noted that the NATO modernisation takes place within the current quantities, and it has almost been overlooked that with the 1979 decision, NATO withdrew 1,000 warheads. Further, the cruise missile is not disturbing any supposed rough equivalence, as the impression is sometimes given. In fact, it is very difficult to consider the cruise as imbalancing since it is designed precisely to meet a new threat posed to the West. The cruise should be seen as a modernisation—a weapons system that can penetrate better than manned aircraft like the F-111, given the new Warsaw Pact air defences.

106. The failure to ratify the SALT II Treaty, it was widely agreed, has had an enormous impact on the public discussion in the Federal Republic and on the growth of opposition to implementation of the 1979 decision. There was a strong and broad consensus that if SALT II had been ratified, the European atmosphere on the TNF issue would be entirely different. Experts and SPD officials spoke of it as a a *fact* that the strength of the so-called peace movements had come only since January 1981; when it became undeniably certain that the United States was not going to ratify SALT II. The CDU/CSU, however, noted that already in the summer and autumn of 1980, there had been opposition to the NATO two-track decision from the SPD and FDP youth organisations and from the German Communist Party and its fellow travellers. For Government officials, in any case, it is extremely difficult to explain the United States reversal to the public, particularly since the former American President, the Secretary of Defence and all the Allied governments have publicly stated that the Treaty is good, balanced and verifiable. Everything about the Treaty cannot have changed that quickly in the past year. The new United States arms control concept should be explained in a convincing way as soon as possible, and the various publics should be informed on why there has been a changed assessment of SALT II.

107. Many arguments and much of the emotional thrust of the movements against the 1979 decision stem from a disbelief in the United States commitment to the dual-track decision. In the early months of 1981, the United States sometimes showed itself insufficiently aware of the impact of its statements on the domestic politics of some Allies. American statements were disturbing for some, precisely because, coupled with the rejection of SALT II, they left the impression that the United States was interested in pursuing LRTNF modernisation, but not arms control. It was stated that if a true readiness for arms control negotiations was demonstrated, the public debate would be much different. In any case, the debate in the Federal Republic is likely to be a bit agitated, because the discussion concerns nuclear weapons in such numbers in a highly populated area.

108. It was repeatedly stated that the modernisation programme was admittedly not something the United States was shoving down

the throats of unwilling European Allies, but that the Europeans had been consulted from the beginning and that it was, in fact, the Europeans who pressed the Americans to give consideration to a modernisation programme. This particular aspect is largely ignored in the public debate.

109. It is not that NATO has done nothing to produce an informed public debate or that NATO has tried to keep its deliberations secret from the member publics. In fact, the debate in the Federal Republic was intensive, both in Parliament and in other public fora, and it was a deliberate Government decision that the debate should be intensive. What is still needed, however, is the provision of exact information, lucidly presented, to the public. The approach should emphasise the actual military situation, without fostering fear, and the seriousness of the Alliance's intention to engage in LRTNF negotiations.

110. The movement in opposition to the 1979 decision is admittedly growing, in part for reasons mentioned above, but for other reasons as well. The Krefield Appeal now claims to number approximately one million.[13] The anti-movements are composed of religious groups, pacifists, ecologists, those opposed to nuclear weapons in general, and a small minority of Communists, and are said to have a special attraction for the young. It was said that the anti-movements had easy access to all the media and that because of media exposure, its true dimensions were exaggerated.

111. While the movements opposed to implementation of the 1979 decision are generally thought to be composed of individuals sincere in their conviction that modernisation will intensify insecurity and increase the dangers of nuclear war, it was variously said that the anti-movements were being manipulated—a few said "inspired"—by the Communists; that in any case, the thrust of their influence furthered Moscow's foreign policy goals; and that the movements were exploiting fear based on ignorance. There was a consensus that for the anti-movements, the threat posed by the Soviet Union had been replaced by a more general threat of nuclear war. There was a general confidence that while the movement was worrisome, it would lose its impetus and be overcome, as was a not dissimilar movement of the 1950's.

112. Members of the CDU/CSU political formation see the strength of the opposition movement as reflecting a failure in political leadership and, in particular, a failure of political leadership properly to inform and educate the citizenry. In addition, they emphasise the political nature of the Soviet threat, that is the way it is seeking to divide NATO, especially regarding implementation of the LRTNF decision, by building the opposition and manipulating groups. According to CDU/CSU figures, the Soviets are using the technique of a "popular front" movement against the dual-track decision and against NATO. Included in this "popular front" are various Communist and Leftist groups, pacifists, anarchists, extremists of the Left and Right, and the youth organisations of the SPD and FDP.

113. The Special Committee also met in Bonn with representatives of two groups organising opposition to the implementation of the 1979 decision and with a representative of an academically-oriented

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[13] For the CDU/CSU analysis of the Krefield Appeal, see page 30, paragraph 90.

institution studying peace and conflict. It became apparent from the testimony and discussions that while various movements and organisations may be united in opposition to NATO's LRTNF modernisation, they are composed of differing trends—pacifist, neutralist, unilateralist, multilateralist—and based on differing analyses with differing objectives. The following summary takes note of several dominant trends and themes without attempting to evaluate the complexity of the various movements or their analyses.

114. The so-called "peace movement" in the Federal Republic is composed of a complex of groups and movements focussing not only on LRTNF modernisation, but more generally reviewing, rethinking, and trying to change the course of overall security policy. One common factor among the groups is the search for alternative methods of security.

115. For many groups, the present security policy does not stand up under close scrutiny. Some reject utterly the possession and use of nuclear weapons, on religious and ethical grounds, as weapons of mass destruction. For others, the very idea of defence through deterrence is bankrupt. For the adherents of the latter position, one line of argument is that it is senseless to build national defence on weapons which, when deterrence fails, will bring about the complete destruction of the society they are meant to protect.

116. There is a very strong sense among many that deterrence will fail and that Europe will be a nuclear battlefield. The cause of such nuclear war would most probably be not a direct attack by the Soviet Union, but a failure in superpower crisis management. The feeling is strong among some that nuclear war is coming closer and closer. Within the context of this fear, deterrence through nuclear weapons is a pledge of self-destruction. The fear of nuclear war and uncertainty about the future is sometimes linked as well with uncertainty about the economic future. The risk assessment, then, is changing, with fear of nuclear war replacing fear of the Soviet Union.

117. The idea of national and international security through a balance of military forces, nuclear and conventional, is also being subjected to close scrutiny and, depending on the particular school of thought, criticised or rejected. One school of thought—a major tendency known as "gradualism"—accepts the strategy of defence through military balance but is working to lower the level of forces on both sides through disarmament and arms control. The gradualists wish to maintain a minimum force that is still of sufficient capability to deter and, at the same time, wish to signal the Soviet Union that security policy should not continue as in the past. Another tendency is working to find methods of unilateral disarmament that would not diminish security.

118. The idea of security is also being questioned. According to some critics, defence and armament are only one aspect of security. The bipolar conflict has brought a concentration on military defence at the cost of progress in Western societies and at the expense of the development of the Third World. The emphasis on defence policy and expenditure has served to justify neglect of ecological considerations and of the proper relations between rich and poor countries.

119. Given the urgency of the issues, the record of arms control negotiations is not promising, Moreover, the chances for significant

arms control negotiations are diminishing, in large part because of the pace of technological changes.

120. It was said that in general these movements are not neutralist or pacifistic in nature. There are pacifist and neutralist elements, but they comprise only a small minority. There is also a small element that was built up with support from Moscow. At present, anti-Americanism plays a minor role, though opposition to the security policies of the Reagan administration is strong.

121. While there is apparently no strong general anti-Americanism at this time, some critics of current security policy consider its growth a real possibility. This assessment is based on the thought that United States and European interests may be drifting apart or at least are not always convergent. Other critics are more certain that European and American security interests are indeed different, and with a dissolution of the bi-polar world, Europe must assume greater independence and play a greater role. Greater European independence can be gained by withdrawing support for American policies, hopefully to gain in this way greater political leverage over the United States.

122. It was evident from the discussions that a great deal of thought, effort and research was going into the search for alternative security policies.

THE UNITED KINGDOM

123. The Conservative government of Mrs. Thatcher has consistently adopted a hard-line position toward the Soviet Union, with Government actions running closely parallel to American policy. The Government of Mrs. Thatcher fully supported the NATO proposal to the Soviet build-up and continues to do so.

124. In the work of the High Level Group and in the evolution of the NATO modernisation proposal, the United Kingdom played an extremely active role. British officials were prominent in urging the importance of the December decision and in stressing the dangers of a failure by the Alliance to act decisively.

125. Within the political parties, the anti-nuclear sentiment has been restricted largely to the Left. The Labour Party is split between unilateralists who want Britain to take the lead in nuclear disarmament, and the multilateralists who prefer that disarmament is carried out in the context of multilateral negotiations. Labour leader Michael Foot has supported unilateralism and the Party is firmly on record as opposing the acceptance of cruise bases in the United Kingdom. The overwhelming vote of the recent Trade Union Congress against any defence policy based on the use or threatened use of nuclear weapons will undoubtedly commit the Labour Party on an out-and-out unilateralist position.

126. At this stage, it is not entirely clear what specific position the new Social Democratic Party will take vis-a-vis the NATO decision. It is certain, however, that it will be multilateralist and strongly support the NATO dual-track decision.

127. The decision to accept cruise missiles and the more recent announcement of the purchase of the Trident missile to replace the Polaris deterrent force has sparked off a new wave of anti-nuclear feeling in the United Kingdom. Opposition to the possession of nuclear

arms and the location of American nuclear bases on British soil is reported to be running higher than in the days of the "Campaign for Nuclear Disarmament (CND)" in the 1950's. The movement has produced a spate of literature and articles arguing for and against the Government's current position. Much of the argument has been evoked by the publication of a Government handbook on civil defence, "Protect and Survive," which provoked a critical review of Government policy by Oxford historian E. P. Thompson called "Protest and Survive." The Campaign for Nuclear Disarmament claims to be enlarging rapidly and is reportedly influential with the Left wing of the Labour Party.

128. The United Kingdom has publicly announced its sites for the deployment of the 160 cruise missiles at two RAF bases located at Greenham Common (60 kms West of London) and Molesworth (90 kms north of London). Greenham Common will be the first operational site in the Alliance and should be ready for the first deployment of the Tomahawk GLCMs in 1983.

MEETINGS IN LONDON

129. The Special Committee met in London on 25th June, 1981 with officials from the Ministry of Defence and from the Foreign and Commonwealth Office, with political figures and with representatives of movements opposed to the NATO dual-track decision. The following is a summary of the main points.

130. For the Government of Mrs. Thatcher, support for the dual-track decision was clear and firm. It was said that the Alliance would be gravely weakened if NATO reversed this decision.

131. The British position, it was said, is based on the Alliance conception of deterrence through flexible response. Prior to the decision, the LRTNF gap was growing, in part because of the aging Alliance systems, which had first been deployed in the 1950's and 1960's, in part because of the increased vulnerability of the West as a result of the Soviet deployment of the SS–20 programme. In virtue of strategic and nuclear parity, any capability gap becomes far more important, and the capability to deter at every level must be sustained. In the context of NATO's aging systems, it was said that the level of the Soviet Union's capability does not affect the West's need for a capability. The Soviet level is important, however, in terms of the vulnerability and survivability of Western systems. The United Kingdom is committed to seeking a reduction of levels through negotiations.

132. The Soviets must see no gaps for opportunity, according to officials. In fact, "avoidance of the perception of opportunity" was suggested as the immediate meaning of the more abstract word "deterrence." This approach leads to a cautious, systematic stopping of holes where dikes may be breached. That strategy has worked so far, and no other sensible alternative has been offered. The problems of extended deterrence had been discussed in the Alliance before Chancellor Schmidt's speech in 1977. There is admittedly a certain overlapping of the concept of deterrence with the idea of possessing a warfighting capability.

133. The United States is not imposing the dual-track decision on Europeans, though one sometimes gets that impression from the public debate. European leaders played a role in highlighting the need for modernisation, and the Europeans now owe it to the United States to accept a visible risk. The modernisation programme is an effort to improve European-American coupling and involves a considerable political burden and risk for the United States. By stationing LRTNF in Europe, NATO is not allowing the Soviet to be sanctuarised. Europeans should shoulder their share of the burden. The idea that Europe will be a shooting range for the superpowers as a result of the 1979 decision is foolish and simply does not hold up under serious analysis. One well-informed observer did suggest that LRTNF modernisation be accompanied by a withdrawal of tactical nuclear weapons.

134. The United Kingdom is determined to go ahead with its share of the programme. The two sites for the 160 GLCMs have been publicly announced—both are less than 100 kms from London. The sites have been cleared and should be ready by the end of 1983; when the first GLCMs are to deployed.

135. The 56 United Kingdom nuclear-capable Vulcans, which came into service in the 1950's, are to be replaced by Tornadoes, which, because of their shorter range, will not have the capability to deep-strike the Soviet Union. However, the Tornado will have a significantly better chance than the Vulcan of penetrating the built-up Soviet air defences.

136. The delay in opening LRTNF negotiations caused by the Reagan strategic policy review has met some understanding among Government figures. It was thought it would prevent a mistake similar to that of the early Carter administration, which proposed to the Soviet Union deep cuts in strategic weapons. Because the venture was undertaken without adequate preparation, the Soviet rejection was a serious setback to the whole SALT process. Similarly, if the United States goes into the LRTNF negotiations without a clear plan, there will be a serious problem. The Reagan administration is apparently determined not to make the same mistake.

137. United Kingdom officials emphasised that arms control should enhance security. The purpose of negotiations is not to gain unilateral advantage, but to enhance security through stability. Insofar as the quantity and quality of weapons systems are destabilising for East-West relations, any effective reductions through arms control negotiations are beneficial in themselves. However, the realistic possibilities for reductions through negotiations should not be exaggerated. Regarding linkage, it was stated that the prime political importance of arms control is not the way negotiations affect the other side's behaviour. As one official stated, arms control negotiations are not "the donkey to carry the full burden of East-West relations." They are not of greater need to the Soviet Union than they are to the West; both parties need them. Linkage of arms control with international behaviour is a mistake. Security is at stake, and there is little room to reward the good and punish the bad. Naturally, an extreme action by the Soviet Union, such as an intervention in Poland, would affect negotiations, but that should be considered differently from world-wide behaviour that is marginal.

138. The Brezhnev proposal for a moratorium was rejected by the Thatcher government as detrimental to both security and stability. It was emphasised that the imbalance frozen by a moratorium would not be good for arms control. The lesson from the Vienna MBFR negotiations is that imbalances produce few incentives for fruitful negotiations.

139. Officials consider the American intention to negotiate firm. It was emphasised and urged not to be forgotten that the Soviet Union had refused to negotiate for six months. Four points were made in speaking of the aims of the LRTNF negotiations. The goal is parity. Negotiations should deal first with the most threatening systems. They should take place within the SALT framework. The approach should be step-by-step.

140. The "zero option" was generally thought conceivable in political terms, but unrealistic and improbable. It might be tried in a deep-cut framework. If the Soviet Union were prepared to demolish the SS-20s, the West would indeed be in a much different situation and could try for the "zero option."

141. Officials acknowledged that verification will pose great difficulties in future arms control negotiations but that these difficulties were principally political in nature and could be overcome. It was suggested that important steps concerning verification procedures had been taken in the context of the Comprehensive Test Ban Treaty negotiations. It was also pointed out that the consultative arrangements in the ABM Treaty provided very helpful precedents.

142. In reply to Soviet charges that the Pershing II is a first-strike weapon, officials stated that while the Pershing II could feasibly be used in a first-strike way if enough of them were launched simultaneously, it is not designed as a first-strike weapon and does not possess a range sufficient to strike Soviet silos.

143. Officials were not favourably impressed with the sea option and recalled that prior to the 1979 decision, the High Level Group had given serious consideration to the sea-launched cruise missile (SLCM) and rejected it because of inherent disadvantages (among others, difficulties with command and control and for the terrain-following guidance system, lower political visibility, diminished accuracy and greater expense). One witness did suggest that there is no reason to preclude the SLCM now, and that it might be useful as a political fall-back position.

144. In the context of the search for broader security, a leading opposition politician, emphasising the thought that Europe was no closer to a nuclear war than ten years ago, still suggested that the Comprehensive Test Ban Treaty was critical for stability in the Middle East, particularly since the Nuclear Non-Proliferation Treaty was moribund. The Comprehensive Test Ban Treaty might be used, though, to revive the Non-Proliferation Treaty.

145. Officials recognise the importance of the new Mitterand government in France for the NATO decision. If the French government continued to support the NATO decision and oppose neutralism, it was suggested that it would be a force for stability in Europe.

146. Government officials recognised the seriousness of the opposition movement, which includes many well-informed people. According

to one political figure, it builds on three developments: first, the public reaction to PD 59 which, although only a tightening-up of existing nuclear strategy, was perceived as a radical change, and suggests a nuclear first-strike and a war-fighting nuclear strategy. This perception must be demolished before popular opinion can be won back. NATO cannot support a nuclear war-fighting strategy, and the United States should issue an authoritative statement that it has no first-strike strategy. Secondly, there is a common misperception that the United States wants to fight a nuclear war in Europe. A third component is the relative lack of success with arms control negotiations. Some progress on arms control in other areas would be most helpful, for example, a first-phase MBFR agreement, or the Comprehensive Test Ban Treaty. The failure to ratify the SALT II Treaty was cited by a number of official and unofficial sources as one of the prime reasons for current disarray in the Alliance. Though it was a bilateral negotiation, it was also an Alliance negotiation, and not just a matter for the United States Senate. It was said that the failure to ratify SALT II had considerably undermined the Alliance.

147. The anti-nuclear movement in the United Kingdom, according to many sources, is a complex phenomenon with many components, including the committed far Left and committed pacifists. Most importantly, it builds on the fear of nuclear war. The revived Campaign for Nuclear Disarmament (CND) has made women and young people its main focus. It was also noted that many important Labour Party figures are neutralist. Thus far, Church organisations have not been particularly active.

148. There was some criticism of the anti-nuclear movement by Government officials for taking the "soft option," that is, playing on emotional arguments and attacking the NATO decision by sometimes distorting facts.

149. It is not entirely easy for United Kingdom officials to explain the NATO programme because civil servants are not allowed to participate in public debate. The Government programme, therefore, concentrates on addresses by officials and published material.

150. A spokesman for the Labour Party presented basic ideas of his Party on security issues. The Labour Party does not accept the rationale for the United Kingdom strategic deterrent. Since the United Kingdom strategic force represents a very small proportion of total strategic forces available to the Alliance, according to the spokesman, it is very difficult to see how it can possibly be considered an independent deterrent and equally difficult to imagine how the United Kingdom would use it independently. In his opinion, the United Kingdom would only fire its missiles if there were a devastating attack on the United Kingdom and the United States refused to intervene. This situation was considered so improbable that the United Kingdom's "independent" strategic deterrent could be rejected. He argued further that the expense of modernising this strategic force with Trident was causing difficulties for the maintenance of British conventional forces. The Labour Party is opposed to the Trident and wishes its withdrawal.

151. Regarding the NATO 1979 dual-track decision the Labour spokesman said there was no clear ground for Soviet TNF superiority. But even if it were granted, for the sake of argument, that the Soviet

Union possessed superiority, he found it difficult to see what they would do with it, and in any case, the United States still possessed sufficient nuclear warheads. While recognising that the SS–20 was a formidable weapon system, he questioned the extent to which it represented a new capability requiring a special response. Moreover, the deployment of cruise missiles in Europe, he said, could be interpreted from the Soviet viewpoint as an expansion of the United States strategic strike force outside the SALT framework. The majority view of the Labour Party is opposed to the deployment of cruise missiles in the United Kingdom, though a Labour minority favours multilateral initiatives. The spokesman recognised that the United States would need to be a nuclear power as long as the Soviet Union was, but argued that there was no need for other countries to be nuclear powers. With or without nuclear weapons based in the United Kingdom, the United Kingdom is already sharing the nuclear risk.

152. Because arms control progress in the past eighteen months had been so dismal, this Labour Party representative found it difficult to believe the NATO dual-track decision had been taken in good faith. Arms control initiatives, he averred, exist nowhere, yet the most urgent requirement is to stop the escalation of nuclear arms. If NATO deploys GLCMs, the Soviet Union will soon deploy GLCMs, and the final result will be another spiral in the arms race.

153. According to the Labour representative, public awareness of security issues has changed dramatically in the past two years. Opinion polls are always suspect, but the polls in the United Kingdom were showing increasing hostility to nuclear weapons. While unwilling to speculate how these trends would develop in the long-term, he was of the opinion that Europe and the United States were beginning to move in different directions.

154. The Committee also met with two opponents of the NATO decision, both active in movements opposed to the NATO dual-track decision.

155. One argued that NATO had not developed a convincing rationale for TNF modernisation prior to the 1979 decision and has still not developed one. He rejected the notion of creating uncertainty in the minds of Soviet military planners about what NATO would do in a crisis. Such an approach, he suggested, was at the basis of deterrence, was inadequate, and reflected NATO's own uncertainty. The same line of thinking was used to justify the United Kingdom's Trident, and was equally inadequate for the same reasons. He considered that if LRTNF negotiations ever took place, they would be in any case "a sham." NATO, he thought, had fallen under the spell of nuclear weapons, yet he concluded that no detailed consideration had been given to when and why they should be used. He expressed particular concern about battlefield nuclear weapons. He was not happy with the fact that the defence of Western Europe was based on a dependence on United States nuclear weapons. Europe, he thought, must begin to think about its own defence independently. He favoured the United Kingdom's withdrawal from NATO's military structure at this time, but not from NATO.

156. A second opponent of the NATO 1979 decision with whom the Special Committee met is deeply involved with the Campaign for

Nuclear Disarmament (CND). The great majority of the CND, he said, is not pacifist. The CND sees in the cruise missile a new type of weapon designed as part of a warfighting capability. In a world already characterised by the possibility of nuclear overkill, it is simply not considered as a proper response. As the Special Session of the United Nations noted, there is neither stability nor balance regarding nuclear weapons, but only a constant striving for superiority in an arms race, and the CND sees the arms race itself as the principal evil. In creating a nuclear threat, which supposedly will not be used, there is no room for a mistake, and the CND regards the whole system of deterrence as immoral. The movement supports mutilateral arms control negotiations. When asked about the CND's attitude to the Soviet threat, the spokesman said most in the movement indeed regarded it as a tyranny, but a tyranny that had been stimulated to pursue the arms race. At the same time, he suggested that Western nations are blind to their own military empires and "peripheral tyrannies." The anti-Americanism in the movement is rather strong, and many in the movement are now cynical about American intentions. He has found a high response among youth to the CND appeal.

ITALY

157. The Christian Democrat government of Francesco Cossiga adopted a favourable position in 1979 on the NATO TNF modernisation proposal and on the deployment of cruise missile launchers on Italian territory. The Government position was endorsed by the Italian Parliament when it approved the plan by 328 votes to 230.

158. The powerful Communist Party (PCI) found itself in a predicament, since the other parties suggested that its position on the TNF issue would be an appropriate test of its independence from Moscow and its support for NATO. The PCI therefore adopted a position that, while opposed to the NATO proposal, acknowledged the existence of a problem concerning the military balance and suggested certain courses of action.

159. The Party directorate issued a statement on 28th November, 1980, in which the PCI proposed:

—To suspend any decision on the manufacture and deployment of new missiles, or at least postpone the question for six months or more;

—To call on the Soviet Union to suspend the manufacture and deployment of its SS–20 missiles;

—To open negotiations immediately on fixing a lower ceiling for the military balance which would guarantee mutual security.

160. The Italian government has continued its commitment to the NATO dual-track decision and to the installation of cruise missiles. Following the Italian governmental crisis in May 1981, connected with the secret Masonic Lodge known as P2, and the resignation of the Christian Democratic Government headed by Arnaldo Forlani, Giovanni Spadolini of the Republican Party formed a new coalition composed of Republicans, Christian Democrats, Socialists, Social Democrats and Liberals. In presenting his programme to the Senate in his initial speech in early June, Premier Spadolini came out strongly in favour of the NATO dual-track decision, favouring arms control negotiations,

rejecting the Soviet moratorium proposal as "unacceptable in its present form," and stating that Italy's position was similar to that of Chancellor Schmidt in approaching LRTNF modernisation as a deterrent to the SS–20s.

161. In August, the Spadolini government announced that the site for the installation of the cruise missiles had been chosen—Comiso, on the Southern tip of Sicily. Because the Government's announcement of the site choice almost coincided with the American announcement to continue production of the Enhanced Radiation Weapon, it caused some disturbance among parliamentarians of the Left. The special two-day session of the Parliamentary Foreign Affairs and Defence Committees convoked to discuss the two issues confirmed the Government position with strong support.

162. The Italian Communist Party, previously rather muted in its opposition to LRTNF modernisation, is reportedly stepping up its opposition to the installation of cruise missiles by articles in *l'Unitá*, the official Communist newspaper, and by organising meetings throughout the country.

THE NETHERLANDS

163. The Dutch government at the time of the NATO 1979 decision was a coalition of the Christian Democrat Appeal (CDA)—itself an alliance of three parties (the Anti-Revolutionary, Catholic People and Protestant parties)—and the Liberal Party (VVD), which is, in fact, more Conservative. In the 150-member Second Chamber, the coalition had a slim majority of two votes. The issue of new nuclear deployments had been the subject of intense public and parliamentary debate in the Netherlands, fanning a deep-rooted opposition to nuclear weapons among much of the Dutch population. The opposition was broadly-based and represented a force the Government could not ignore. The Liberal Party, the junior party in the coalition, strongly favoured deployment, as did the majority of the CDA. However, the number of CDA members strongly opposed to deployment was sufficient to ensure defeat if it came to a vote favouring deployment, and the main opposition party, the Labour Party (PVDA), was almost unanimously opposed to the decision.

164. After difficult political negotiations, the Government took the decision to support the NATO final Communiqué announcing the agreement of all members for the modernisation proposal, adding the reservation that the Netherlands would not agree to participate in deployment for two years.

165. The nuclear issue was considered central to the May 1981 elections. The Christian Democratic Appeal (CDA) took the position that the Netherlands' six nuclear tasks should, after consultation with NATO, be reduced. The anti-deployment wing of the Party remained firm in its opposition to new nuclear weapons on Dutch territory, while the mainstream of the Party emphasised that progress in the negotiations would be taken into account when Holland took its decision on deployment in December 1981.

166. The Labour Party, the largest of the opposition parties, had as a central plank in its platform for the May elections the rejection of NATO's modernisation plan and a radical reduction of Holland's

six nuclear tasks. The central division in the Labour Party came over how many nuclear tasks should be eliminated. A proposal, supported by the majority of the Party, to abolish all nuclear tasks, was only averted by the threatened resignation of the Party leader, Joop den Uyl. The American failure to ratify SALT II has been strongly criticised by the Party.

167. The results of the election left this issue unresolved. The Christian Democrat Appeal lost one seat, the Liberals lost two seats, leaving the coalition a total of 74—two short of a majority. The Labour Party lost 9 seats, and smaller parties opposed to deployment gained.

168. The position of political groups supporting the NATO dual-track decision of 1979 has been weakened considerably by the failure of the American Senate to ratify SALT and by the initial reluctance of the Reagan administration to press for LRTNF negotiations. The Dutch government faces a deadline; it is due to review its decision on deployment in December 1981.

169. The anti-nuclear sentiment among the political parties is supported in Holland by several institutions and broader movements that help account for the strong anti-nuclear sentiment at the grass-roots level. Among these, religious institutions and polemological institutes play a key role. Perhaps the most important of these is the Interkerkelijk Vredesberaad (IKV), or the Interchurch Peace Council. With a membership of 15,000–20,000 and a grass-roots organisation, the IKV has as its aim to stop the arms race by unilateral disarmament and to exert influence on the political parties to move in this direction. The basis of the IKV argument is that nuclear weapons are immoral and, by unilateral disarmament, the Netherlands could provide a revolutionary example that other countries might follow. The IKV Synod of Bishops has publicly stated its opposition to the deployment of new nuclear weapons on Dutch territory. A similar Roman Catholic organisation, Pax Christi, also has an anti-nuclear element, but is far less powerful than the IKV. A third organization, relatively insignificant in numbers but potentially influential, is the Army Peace and Security Council (Het Vredes en Veiligheid Beraad Drijgsmacht) which, among its other activities, has conducted surveys of the attitudes of the military services toward deployment of nuclear weapons.

BELGIUM

170. For the past few years, Belgium has been preoccupied with a number of internal problems directly related to the friction between the Flemish and Walloon communities. This tension has been exacerbated by steadily worsening economic conditions.

171. During the period of preparation and consultation that preceded the NATO 12th December decision, it was confidently thought that the coalition Government would endorse the proposal and accept the deployment of cruise missiles on Belgian territory. But domestic opposition to the deployment of cruise missiles had manifested itself, particularly among the Flemish Socialists, and prior to the 12th December NATO ministerial meeting, the issue of cruise missiles had scarcely been debated in the Government (then consisting of the

Flemish and Walloon sections of the Christian Democrats and Socialist Parties and the Francophone Front). The Cabinet met on the morning of 12th December in order to reach a decision. Their decision was presented to the NATO ministers by Foreign Minister Henri Simonet who, noting the consensus of the meeting and confident of the future Belgian decision, endorsed the modernisation decision, saying that the Belgian Government would *confirm* the application of the decision for Belgian territory is six months in the light of progress on arms control. However, the Cabinet itself had endorsed the modernisation decision, saying it would *take* its decision on the application to Belgian territory in six months in the light of progress on arms control.

172. Following a Government crisis in April, the coalition Government collapsed and Mr. Simonet ceased to be Foreign Minister. After month-long negotiations, a new coalition Government of six political groups was formed and immediately became preoccupied with the linguistic issue and the deteriorating Belgian economy. Consequently, during the meeting of the NATO foreign ministers in Ankara in June 1980, the Belgian Government requested an extension.

173. In September 1980, the Government issued a declaration regarding the deployment of cruise missiles on Belgian territory. The operative paragraphs of this declaration read:

> "The Government hopes that the talks will lead to positive results and that, more especially, the balance of theatre nuclear weapons will be maintained at the lowest possible level. Belgium will spare no effort to make the maximum contribution to this end.
>
> "In order to facilitate the conduct of the negotiations, the Government declares that Belgium is here and now prepared to accept the outcome of the negotiations with the Soviet Union and to execute its role within the context of the Alliance.
>
> "Should the negotiations between the United States and the Soviet Union not succeed, Belgium, in concert with its Allies, will take all the measures agreed upon by the NATO partners.
>
> "For this purpose, the Government will examine the state and progress of the negotiations every six months in conjunction with its Allies and draw the necessary conclusions in the context of the Alliance. Parliament will be kept informed regularly."

174. The ambiguous wording of the declaration allowed both supporters and opponents of deployment to claim victory. This six months review remains the Belgian position with the new coalition formed in March 1981.

175. The Flemish Socialists continue to be the party most strongly opposed to deployment. They have made opposition to deployment one of the points on which they participate in the Government and their political leaders now have considerable political investment in the issue. The leader of the Flemish Party, Karl Van Miert, sees the NATO decision as an example of overwhelming American pressure on the Europeans and stresses that deployment in Belgium is linked to a

possible agreement with the Soviet Union. Since no serious negotiations have yet begun, he argues that Belgium is not obliged to accept deployment of the missiles. The French Socialists for the most part do not oppose deployment, but would find it difficult to remain in the Government if the Flemish Socialists walked out.

176. Because of the fragility of coalition politics and the severe economic strains in Belgium it is difficult, on the one hand, to see how the Government will be in a position to take a firm decision on cruise missile deployment in the near future. On the other hand, a very large majority of Belgian officials and politicians strongly support the NATO dual-track decision, reject the notion that Belgian postponement is indefinite, and strongly stress Belgian solidarity with the Alliance and its willingness to take all steps necessary to counteract what is perceived as an increasing Soviet threat. The original decision is to be reviewed in December 1981.

ANNEX

COMMUNIQUE ISSUED AT A SPECIAL MEETING OF THE NATO FOREIGN AND DEFENCE MINISTERS IN BRUSSELS ON 12TH DECEMBER, 1979

1. At a special meeting of Foreign and Defence Ministers in Brussels on December 12, 1979:

2. Ministers recalled the May 1978 Summit where governments expressed the political resolve to meet the challenges to their security posed by the continuing momentum of the Warsaw Pact military build-up.

3. The Warsaw Pact has over the years developed a large and growing capability in nuclear systems that directly threaten Western Europe and have a strategic significance for the Alliance in Europe. This situation has been especially aggravated over the last few years by Soviet decisions to implement programs modernizing and expanding their long-range nuclear capability substantially. In particular, they have deployed the SS-20 missile, which offers significant improvements over previous systems in providing greater accuracy, more mobility, and greater range, as well as having multiple warheads, and the Backfire bomber, which has a much better performance than other Soviet aircraft deployed hitherto in a theater role. During this period, while the Soviet Union has been reinforcing its superiority in Long-Range Theater Nuclear Forces (LRTNF) both quantitatively and qualitatively, Western LRTNF capabilities have remained static. Indeed these forces are increasing in age and vulnerability and do not include land-based, long-range theater nuclear missile systems.

4. At the same time, the Soviets have also undertaken a modernization and expansion of their shorter range TNF and greatly improved the overall quality of their conventional forces. These developments took place against the background of increasing Soviet intercontinental capabilities and achievement of parity in intercontinental capability with the United States.

5. These trends have prompted serious concern within the Alliance, because, if they were to continue, Soviet superiority in theater nuclear systems could undermine the stability achieved in intercontinental systems and cast doubt on the credibility of the Alliance's deterrent strategy by highlighting the gap in the spectrum of NATO's available nuclear response to aggression.

6. Ministers noted that these recent developments require concrete actions on the part of the Alliance if NATO's strategy of flexible response is to remain credible. After intensive consideration, including the merits of alternative approaches, and after taking note of the positions of certain members, Ministers concluded that the overall

interest of the Alliance would best be served by pursuing two parallel and complementary approaches of TNF modernization and arms control.

7. Accordingly ministers have decided to modernize NATO's LRTNF by the deployment in Europe of U.S. ground-launched systems comprising 108 Pershing II launchers, which would replace existing U.S. Pershing I–A, and 464 ground-launched cruise missiles (GLCM), all with single warheads. All the nations currently participating in the integrated defence structure will participate in the programme: the missiles will be stationed in selected countries and certain support costs will be met through NATO's existing common funding arrangements. The program will not increase NATO's reliance upon nuclear weapons. In this connection, ministers agreed that as an integral part of TNF modernization, 1,000 U.S. nuclear warheads will be withdrawn from Europe as soon as feasible. Further, ministers decided that the 572 LRTNF warheads should be accommodated within that reduced level, which necessarily implies a numerical shift of emphasis away from warheads for delivery systems of other types and shorter ranges. In addition they noted with satisfaction that the Nuclear Planning Group is undertaking an examination of the precise nature, scope and basis of the adjustments resulting from the LRTNF deployment and their possible implications for the balance of roles and systems in NATO's nuclear armory as a whole. This examination will form the basis of a substantive report to NPG ministers in the autum of 1980.

8. Ministers attach great importance to the role of arms control in contributing to a more stable military relationship between East and West and in advancing the process of détente. This is reflected in a broad set of initiatives being examined within the Alliance to further the course of arms control and détente in the 1980's. Ministers regard arms control as an integral part of the Alliance's efforts to assure the undiminished security of its member States and to make the strategic situation between East and West more stable, more predictable, and more manageable at lower levels of armaments on both sides. In this regard they welcome the contribution which the SALT II Treaty makes toward achieving these objectives.

9. Ministers consider that, building on this accomplishment and taking account of the expansion of Soviet LRTNF capabilities of concern to NATO, arms control efforts to achieve a more stable overall nuclear balance at lower levels of nuclear weapons on both sides should therefore now include certain United States and Soviet long-range theater nuclear systems.

This would reflect previous Western suggestions to include such Soviet and U.S. systems in arms control negotiations and more recent expressions by Soviet President Brezhnev of willingness to do so. Ministers fully support the decision taken by the United States following consultations within the Alliance to negotiate arms limitations on LRTNF and to propose to the U.S.S.R. to begin negotiations as soon as possible along the following lines which have been elaborated in intensive consultations within the Alliance:

A. Any future limitations on U.S. systems principally designed for theater missions should be accompanied by appropriate limitations on Soviet theater systems.

B. Limitations on United States and Soviet long-range theater nuclear systems should be negotiated bilaterally in the SALT II framework in a step-by-step approach.

C. The immediate objective of these negotiations should be the establishment of agreed limitations on United States and Soviet land-based long-range theater nuclear missile systems.

D. Any agreed limitations on these systems must be consistent with the principle of equality between the sides. Therefore, the limitations should take the form of de jure equality in ceilings and in rights.

E. Any agreed limitations must be adequately verifiable.

10. Given the special importance of these negotiations for the overall security of the Alliance, a special consultative body at a high level will be constituted within the Alliance to support the U.S. negotiating effort. This body will follow the negotiations on a continuous basis and report to the Foreign and Defense Ministers who will examine developments in these negotiations as well as in other arms control negotiations at their semiannual meetings.

11. The Ministers have decided to pursue these two parallel and complementary approaches in order to avert an arms race in Europe caused by the Soviet TNF buildup, yet preserve the viability of NATO's strategy of deterrence and defense and thus maintain the security of its member States.

A. A modernization decision, including a commitment to deployments is necessary to meet NATO's deterrence and defense needs, to provide a credible response to unilateral Soviet TNF deployments, and to provide the foundation for the pursuit of serious negotiations on TNF.

B. Success of arms control in constraining the Soviet buildup can enhance Alliance security, modify the scale of NATO's TNF requirements, and promote stability and détente in Europe in consonnance with NATO's basic policy of deterrence, defense and détente as enunciated in the Harmel Report. NATO's TNF requirements will be examined in the light of concrete results reached through negotiations.

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THE CONTEXT FOR DECISION

1. Alliance Strategy [1]

Almost since its inception the alliance has grappled continuously with the problem of extending the protection of American strategic nuclear power to the defense of Western Europe. In doing so, NATO has faced seemingly irreconcilable conflicts of interest. Such differences are inherent in the nature of the alliance because the United States, militarily far superior to and geographically very distant from its European allies, is committed to assist in the defense of those allies, though the ultimate fulfillment of this commitment could result in the destruction of American society. This situation has inevitably produced different attitudes and perceptions between Europe and the United States concerning what constitutes an appropriate and credible strategy of deterrence, and the forces needed to support it.

Conscious of the potential devastation of any war, nuclear or conventional, for their territory, Europeans have tended to advocate a strategy of absolute deterrence through the immediate threat of all-out nuclear war, and have looked with unease and suspicion at any development that appears to distract from this ultimate threat, or that threatens to "decouple" Europe from the American strategic nuclear guarantee.

The United States, on the other hand, equally conscious of the awesome consequences for American territory of strategic nuclear war, has sought to avoid being faced with the choice of all-out nuclear war or defeat. While maintaining the ultimate threat of strategic nuclear retaliation, American officials have increasingly emphasized the need to deter conflict at all possible levels through the provision of a wide range of capabilities and options. They have endeavored to look "beyond" deterrence, and, in the event that deterrence should fail, to facilitate the termination of any conflict short of all-out nuclear war. The desire for greater flexibility has been clearly visible in the development of American strategic forces. Presidential Directive 59 (July 1980), putting increased emphasis on attacking military targets in the Soviet Union in addition to Russian cities and industrial complexes, is a recent manifestation of the move toward a more discriminating nuclear strategy. In his book, "White House Years," Henry Kissinger confirms that this trend commenced officially in the late 1960's:

> We therefore developed in 1969 new criteria of "strategic sufficiency" that related our strategic planning to the destruction not only of civilians but of military targets as well. They gave us at least the theoretical capability to use forces for objectives other than the mass exterminations of populations.[2]

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[1] It should be noted that it is not possible here to provide a detailed account of the development of nuclear strategy within the alliance or of the events where major debates occurred. The main purpose of this brief review is to illustrate the continuity of several of main issues that emerged during the LRTNF debate.

[2] Henry Kissinger, "White House Years" (Little, Brown & Co., 1980).

This search for greater credibility through more usable options has been reflected at all levels of alliance strategy.

American insistence on the need for flexibility in alliance strategy has been endorsed by the Europeans through the adoption by NATO in the mid-1960's of the strategy of flexible response. But this endorsement concealed a substantial degree of unease on the part of the Europeans concerning the implications of this strategy. Many Europeans viewed the retention of capabilities sufficient to permit a limited or flexible response as inevitably diminishing the automaticity of American strategic retaliation, and even facilitating the outbreak of a limited conflict in Europe. Commenting on the problems that hindered the adoption of flexible response during the 1960's Helmut Schmidt has written:

> First, to renounce what was earlier imagined to be the automaticity of nuclear response to aggression seemed to increase the dangers of a war which, though regarded as a "limited" war by the superpowers, would be no less than a war of annihilation for the countries of the battlefield. For this reason people clung to the deceptive hope that such a war could be made impossible by holding firm to what was thought to be an absolute deterrent.[3]

Thus, while American officials argue that flexibility strengthens deterrence by insuring a continuum of capabilities which "couple" Europe to the strategic guarantee, many Europeans continue to suspect that the consequence of flexible response will be precisely the opposite—the containment of any future conflict to European territory. Henry Kissinger has summarized this transatlantic divergence as follows:

> * * * the early use of strategic nuclear weapons, which means a United States-Soviet nuclear war fought over their heads. This was precisely what was unacceptable to American planners. Our strategy—then and now—must envisage the ultimate use of strategic nuclear weapons if Europe can be defended in no other way. But it must also seek to develop other options, both to increase the credibility of the deterrent and to permit a flexible application of our power should deterrence fail.[4]

Faced by these conflicts of interest, the alliance has attempted a series of adjustments and innovations in order to produce a mutually acceptable solution. While political and technological conditions have changed, the basic issue remains the same—unwilling or unable to produce conventional forces sufficient to deter Soviet aggression, or to create an independent integrated European nuclear deterrent, Europeans continue to rely for their ultimate protection on the American strategic nuclear guarantee. As this guarantee is based on confidence and trust, and as American and European attitudes concerning what constitutes effective deterrence diverge, the perennial problem for the alliance has been to evolve a nuclear strategy that sustains both European confidence and American national interests. In this sense the LRTNF debate represents the latest chapter of a continuing saga. It is not an isolated episode, but is part of a broader and long enduring problem of achieving a credible and mutually acceptable role for nuclear weapons in alliance strategy.

As the following historical account demonstrates, efforts to produce a mutually acceptable strategy have pursued two separate but related approaches: First, the provision of capabilities that insure direct, visible, and mutually acceptable linkage between a conventional war in Europe and the American strategic nuclear guarantee; second, increased participation by the Europeans in the operation and planning of alliance nuclear strategy.

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[3] Helmut Schmidt "The Balance of Power" (William Kimber, London, 1969).

[4] Kissinger, op. cit.

2. Historical Background

NATO was established during a period of clear and unchallenged American nuclear superiority. The United States possessed a substantial force of long-range bombers, a comprehensive system of bases that effectively ringed the Soviet Union, and a substantial number of aircraft carriers equipped with nuclear capable aircraft. Thus, the superiority of Soviet conventional forces was countered by the U.S. Strategic Air Command (SAC) equipped with atomic weapons. NATO conventional forces provided the "shield" of Western defense, designed to hold Soviet aggression until the "sword," represented by SAC, could deliver its counterblow of massive retaliation. While the Soviet Union detonated an atomic device in 1949 and a hydrogen bomb in 1953, it initially lacked the means of delivery. Moscow did not possess bombers of intercontinental range, and missiles were still in the development stage. But, by the mid-1950's, development by the Soviet Union of a long-range bomber force, though limited in size and capability compared with that of the United States, and rapid advances in missile technology, dramatically illustrated by the Sputnik launching in 1957, began to cast doubts on the credibility of the strategy of massive retaliation.

Inevitably, the question began to form in European minds—if the Soviet Union possessed the means to cause unacceptable damage to American cities—how realistic was it to expect the United States to use its strategic nuclear forces in the event of Soviet aggression against Europe?

European concern over this issue was intensified, particularly in NATO military circles, when in the late 1950's the Soviet Union began to deploy substantial numbers of medium and intermediate range ballistic missiles, SS-4's and SS-5's, targeted on Europe. These missiles almost certainly had the dual purpose of countering the U.S. nuclear threat while the development of Soviet intercontinental missiles was completed. With the deployment of Soviet ICBM's, the Soviet justification became the threat posed by the nuclear forces of the United Kingdom, France, and China.

In 1957, the NATO Council decided to deploy American medium-range ballistic missiles in Europe: 60 Thor missiles in England, and 45 Jupiter missiles in both Italy and Turkey. These systems were deployed in the spring of 1959 under dual operation and SACEUR command, but the warheads remained in American custody. The Eisenhower administration made it clear that the final decision to fire would be in American hands. These deployments were pressed by the United States in order to offset the perceived threat posed by Soviet deployment of long-range ballistic missiles. A number of factors contributed to this rationale: The need to bolster American deterrent forces; to restore the diminishing confidence of European governments in the efficacy of massive retaliation; and to respond to the military pressure, mainly from the SACEUR, General Norstad, that Europe needed a nuclear missile force capable of striking the Soviet Union. The vulnerability of these missiles, however, limited their political and military value. They were phased out in 1963 as new technologies (land- and sea-based intercontinental ballistic missiles) facilitated the adoption of more distant and survivable basing strategies. Technological and procedural developments, therefore, satisfied many of the arguments for original Western MRBM deployments, but the idea that the alliance required a European-based force capable of striking the Soviet Union remained alive.

It is interesting to note that the duality of policy toward the Soviet Union concerning the balance between deterrence and reassurance that emerged during the LRTNF debate was also present during this period. In 1961, Helmut Schmidt, justifying the installation of Thor and Jupiter missiles as enhancing the credibility of American strategy, wrote that—

> The installation of American IRBM's in Europe also has the object of making it clear that NATO can defend itself against threats of nuclear blackmail exclusively and expressly directed against Europe and Europe alone.[8]

At the same time, however, he drew attention to the provocative nature of the deployments—

> Nevertheless, everyone capable of objective reasoning must concede that the stationing of enemy IRBM's, so to speak, on its very threshold (Turkey) must produce the psychological effect of a provocation on any great power. One need only imagine how the Americans would react if the Soviets were to station IRBM's in Cuba.

Schmidt noted that the military value of the Thors and Jupiters was very small, and was only of transitory significance "until the Americans close the so-called missile gap and eliminate the Soviet lead in ICBM production." Furthermore, he argued that these deployments and other plans for the deployment of missiles in Europe then under discussion, had done nothing to restore the confidence of European governments in the strategy of nuclear retaliation by U.S. forces.

In 1959, General Norstad advocated a force of MRBM's in addition to the Thors and Jupiters then being placed in Europe and began to speak of the need to extend the nuclear authority of NATO. This military pressure for the deployment of a separate European based nuclear force, in which the Europeans would have a greater say, coincided with pressure from other areas. In addition to their diminishing confidence in the American strategic commitment, some Europeans were growing increasingly restive at their lack of participation in alliance nuclear strategy and were eager to find a formula that would remedy this situation. The Americans, for their part, were becoming concerned at the trend toward independent national deterrent forces in the United Kingdom and France.

The United Kingdom had exploded an atomic bomb in 1952, and its independent deterrent in the form of its V-bomber force had existed since 1955. In 1958 the British Government announced an increased emphasis on its nuclear forces, a policy which culminated with the purchase of Polaris missiles from the United States under the terms of the Nassau Agreement in 1962. The French Government had also made clear its plans to develop an independent deterrent, a decision confirmed by Gen. Charles de Gaulle on his accession to power. The French independent deterrent, consisting initially of 50 Mirage IV bombers, came into operation in 1964.

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[8] Helmut Schmidt, "Defense and Retaliation" (1961).

The congruence of these political and military pressures, the perceived need to enhance the American nuclear guarantee and to offset Soviet MRBM deployment, the European requirement for greater participation in nuclear matters, and the American desire to head off the development of independent nuclear forces, produced a number of schemes between 1959 and 1963 for the creation of some form of NATO nuclear force. These schemes included: General Norstad's proposal for making NATO a fourth atomic power by evolving multinational responsibility for a system of land-based MRBM's; the Bowie report which recommended the strengthening of NATO's conventional capability and suggested NATO-command strategic nuclear submarines with Polaris missiles as an alternative to land-based IRBM's in Europe; Secretary Herter's proposal in his last NATO Ministers' meeting that the United States would commit to NATO 5 nuclear submarines with 80 SLBM's, provided agreement could be reached on a shared mechanism of control; the proposal by Secretary of Defense Gates for the deployment of Polaris missiles on barges and flatcars in Europe, and some modification of control arrangements over nuclear warheads stockpiled in Europe to increase the powers of SACEUR; and finally the idea for a multilaterally owned and controlled seaborne force, the MLF.

Despite the variety of ideas represented by these schemes, none, save the MLF, made any significant progress. Under the Kennedy administration, Secretary of Defense McNamara was strongly opposed to relinquishing control of nuclear weapons and linked the concept of nuclear sharing to an augmented commitment to conventional forces. In a speech to NATO Foreign and Defense Ministers in Athens in 1962, McNamara specifically reaffirmed the ability of U.S. strategic forces to fulfill an IRBM role in Europe and criticized the perceived need for independent nuclear forces. This declaratory policy, however, did not check the momentum toward a NATO nuclear force, and hopes for a mutually acceptable solution became increasingly focused on the concept of the MLF.

3. THE MULTILATERAL FORCE (MLF)[6]

It is not necessary here to provide a detailed account of the initiation and eventual failure of the MLF concept,[7] but merely to note several characteristics of the episode which are of direct relevance to the LRTNF debate 20 years later.

(1) The military rationale for the MLF was centered on a NATO requirement stated by SACEUR General Norstad, and reaffirmed by his successor General Lemnitzer, for MRBM's stationed on or near the

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[6] The MLF concept envisaged 25 surface ships, each ship carrying eight Polaris A-3 missiles, and manned by multinational crews. The fleet would be assigned to SACEUR.

[7] For a detailed discussion of the MLF episode see "The Cybernetics of Decision Making" by John Steinbrunner.

European Continent to replace obsolescent, vulnerable strike bombers, and to counter the increasing number of Soviet MRBM's capable of striking Europe. This requirement was initially developed during a period when some observers were concerned that the United States might in a few years be in a position of nuclear inferiority due to Soviet long-range missile development and medium-range missile deployment.

(2) A number of American analysts were critical of the military rationale for the MLF as they pointed out that existing and programed American strategic systems both land based and sea based were more than sufficient to cover Soviet targets.

(3) It was acknowledged that political concerns provided the driving impetus behind the MLF proposal; namely, increasing European frustration over exclusive American control of nuclear affairs, and also concern that, at a time when European-based nuclear strike bombers were being phased out, American systems based in the United States did not provide a high enough degree of visible commitment.

(4) West German political agitation and a general desire within the alliance to defuse pressure in the Federal Republic to achieve nuclear status was prominent in the political rationale for the MLF.

(5) On the question of basing for a European nuclear force, promoters of the sea-based MLF argued strongly against land-based systems.

> The public sight of dozens of nuclear-tipped missiles of strategic range moving around Germany and elsewhere on the crowded Continent would be disturbing—putting it mildly—to domestic and allied opinion.[8]

(6) Finally, in the same vein, it is interesting to note that contrary to arguments during the LRTNF debate concerning the credibility of Polaris SLBM's assigned to NATO, the Polaris missile was considered by some U.S. analysts to be an effective counterforce weapon system,

> The MLF's long range Polarises would indeed have the yield and accuracy to destroy all but the most hardened fixed Soviet missiles in addition to airfields and other stationary interdiction targets in the rear of the battle area.[9]

The MLF proposal was aimed at preserving American operational control over nuclear weapons systems while simultaneously enabling European allies to participate in the management of a Western nuclear deterrent assigned to NATO. However, as a compromise formula trying to satisfy highly ambiguous and frequently divergent aims, its chances of success were always limited. The final demise of the project led to a search for alternative and less ambitious formulas to accommodate the conflicting transatlantic requirements.

Following the failure of the MLF, the alliance adopted a number of measures which, with varying degrees of success, addressed the dual problem of creating more credible linkage and of facilitating greater European participation in alliance nuclear affairs. The Nuclear Planning Group (NPG)[10] was established to provide a forum in which alliance members could participate and jointly exercise influence over the planning for, and the conduct of, the use of nuclear weapons. The American President agreed to assign 64 Polaris SLBM's directly to NATO which, along with the British Polaris force, would be directly responsive to NATO and thus SACEUR's requirements,[11] in this sense replacing the obsolescent Thors and Jupiters. The United States deployed F–111 medium range all-weather nuclear strike aircraft to the United Kingdom to be likewise responsive to SACEUR's requirements. Finally, and most significantly, following the departure of France from the integrated military command, NATO adopted the strategy of flexible response.

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[8] Robert E. Osgood, "The Case for the MLF: A Critical Evaluation," the Washington Center for Foreign Policy Research, 1964, p. 17.

[9] Ibid., p. 15.

[10] The Nuclear Planning Group was originally composed of four permanent members, the United States, the United Kingdom, Italy, and West Germany and three members rotated at 18-month intervals. Since 1979 it has been composed of all members in the Defense Planning Council, that is, all NATO members except France and Iceland.

4. Flexible Response

The adoption of the strategy of flexible response represented the culmination of a series of efforts within the alliance to accommodate highly divergent and virtually irreconcilable interests and attitudes concerning the role of nuclear weapons. Under this doctrine—known as MC–1413—the alliance signaled its determination to resist Soviet aggression at any level it should occur, and its willingness to escalate the conflict to whatever level necessary for its termination. A ladder of escalation options would subsequently exist from conventional to strategic forces, via the nuclear forces deployed in the European theater, both those for battlefield use and those longer range systems assigned to SACEUR.

Flexible response represented an uneasy compromise between the conflicting transatlantic perspectives. While theoretically sound, it left considerable latitude for differences concerning the levels of forces necessary at each stage to insure credible deterrence. This ambiguity permitted the accommodation of conflicting American and European interests, but it did not represent their reconciliation. Divergences have continued to reappear over the capabilities necessary to sustain the credibility of flexible response.

American officials have argued that, because deterrence rests on the possession of credible means, NATO's capabilities at all levels should be made compatible with the doctrine they support. This has led to an emphasis on the importance of conventional forces and on the warfighting characteristics of nuclear weapons. Europeans have accepted the theoretical logic of the American position concerning the credibility of deterrence, but in practice most have looked uneasily at any American proposal that appears to offer the prospect of containing a conflict to European territory. While accepting the need for stronger conventional forces, they have practiced, in the words of one European defense analyst, a policy of "conventional insufficiency."[12] At the nuclear level Europeans have been reluctant to look beyond deterrence to the actual requirements for nuclear weapons in a conflict situation. In this sense, for many Europeans, the adoption of flexible response has represented a continuation of the doctrine of massive retaliation in another guise.

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[11] These arrangements were in accordance with the Nassau agreement under which it had been agreed that the British Polaris force would be assigned to NATO subject to withdrawal when "supreme national interests are at stake."

[12] Brigadier Kenneth Hunt, "European Military Postures, paper presented at the Wilson Center International Security Studies Core Seminar Session, February 1980.

The ambiguity in NATO's doctrine of flexible response and the difference in views between Americans and Europeans concerning "how" and "when" nuclear weapons would be used is most apparent in the field of tactical or battlefield nuclear weapons.

5. TACTICAL NUCLEAR WEAPONS (TNW)

The NATO Council decided in 1954 to introduce tactical nuclear weapons into Europe in order to compensate for Soviet conventional superiority and to signal the intention of fighting any war that might arise with the tactical nuclear weapons from the very outset. Any initial advantage that was gained by this decision, however, was soon negated by Soviet acquisition of tactical nuclear systems. In the meantime, a substantial number of nuclear warheads [18] of various sizes and for a wide range of delivery systems were accumulated in Europe and had to be absorbed into NATO doctrine. From the outset of their deployment, perceptions concerning the use of tactical nuclear weapons were never very clear and the passage of time has not produced greater clarity. A clear conflict of interest exists. Europeans have traditionally viewed tactical nuclear weapons as obviating the necessity of providing conventional capabilities sufficient for credible conventional defense, and as providing a nuclear trigger to American strategic systems. They have favored an "early use" of TNW and, therefore, a relatively low nuclear threshold, in order to signal decisively the political resolve to escalate to all-out nuclear war, and to minimize collateral damage to German territory. They have, therefore, emphasized the political, symbolic, and essentially deterrent value of these nuclear systems.

American officials, on the other hand, obviously prefer to delay a decision to use nuclear weapons as long as possible in order to avoid the possibility of escalation to the strategic level. American officials also argue that, in order to be credible, TNW must be usable, and that NATO's TNW posture should provide a range of credible options. They have increasingly stressed the functional utility and, therefore, warfighting characteristics, of tactical nuclear systems, as for example, in the development of the enhanced radiation warhead (ERW).

A current defense adviser to President-elect Reagan summarized. in 1972, the paradox in Western thinking in the use of nuclear weapons as follows:

> On the one hand, we had TNW's deployed for deterrence of attacks on Allies: on the other hand, avoidance of nuclear usage always had at least as high a priority or value as deterrence. Western thought became again focused on the avoidance of nuclear war and this became translated into avoidance of usable weapons, usable doctrines, usable strategies, avoidance of what would make war "thinkable" since to avoid nuclear war required that it be kept unthinkable and the way to keep it unthinkable is to base nuclear strategy not on military effec-

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[18] Tactical nuclear weapons are deployed with both American and European forces. In the case of European systems, the nuclear warhead is always held in American custody. This is the so-called dual key system under which American political authorization is necessary before the warhead can be released for use. In the case of nuclear weapons deployed with U.S. Forces the Athens guidelines state that the United States will consult with its allies "time and circumstances permitting."

> tiveness and limiting damage but on propositions of the utmost destructiveness and on threats of escalation.[14]

NATO doctrine has absorbed these deep-rooted differences concerning the use of tactical nuclear weapons by making the precise terms of their employment deliberately ambiguous. According to one NATO official,

> The NATO doctrine for the use of nuclear weapons is clear, concise, simple, and direct. It is that, when required, the alliance would respond with nuclear weapons on the scale appropriate to the circumstances.[15]

While this position may be simple and clear it certainly allows room for considerable differences concerning potential usage. Perhaps a better summation of official policy toward the use of tactical nuclear weapons would be "as soon as necessary and as late as possible."

6. THE RFG'S SPECIAL ROLE

Finally, in this brief review of alliance nuclear history, it is important to note the prominent role played by the Federal Republic of Germany. Awareness of its vulnerability as NATO frontline and the Federal Republic of Germany's renunciation of the manufacture of nuclear weapons, with the consequent dependence on the American strategic guarantee, has given the Federal Republic of Germany a particular interest in the evolution of alliance strategy. At the same time, the legacy of the FRG's immediate past and more particularly its long-term interest in developing good relations with the East has made German leaders sensitive to the potential implication of any changes in NATO defense doctrine. These historic and geographic factors have produced an awareness of the need to maintain a balance between the military preparations necessary for deterrence and the dialog and negotiation necessary to diminish tension between East and West.

The overriding objective in German security policy has been to prevent the outbreak of war, conventional or nuclear, on German territory. This has led to a strong emphasis on the deterrence aspect of alliance strategy and great sensitivity to any development that appears to weaken the credibility of deterrence.

> The prevention of any kind of war is of vital importance to us since even an intensive area-covering conflict would have devastating consequence in our densely populated area. This is why we are so vitally interested in the operability of the alliance's strategy of war prevention through credible deterrence.[16]

Similarly, the Federal Republic of Germany has always stressed the collective nature of the alliance and the need for shared risk taking on the part of all its partners. Equally, German actions and attitudes have been a constant preoccupation for Germany's allies, the traditional concern being to avoid the possibility of German acquisition of nuclear weapons.

Thus, while West German anxieties concerning the Federal Republic of Germany's own security have guaranteed an active, and sometimes prominent role in debates over alliance strategy, political realities have always conditioned the West German response and participation.

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[14] William van Cleave, LASH panel on Tactical Nuclear Warfare (Toc-5) April 5–6, 1977. Informal Report LA–6908–MS.

[15] Richard Shearer, Director for Nuclear Planning, NATO. Statement on the role of nuclear weapons in NATO strategy to the Military Committee of the North Atlantic Assembly, September 1975.

[16] General Tandeki. Address to the North Atlantic Assembly's Subcommittee on Defense Cooperation, April 1978.

In 1957, the Adenauer government expressed support for the deployment of MRBM's in Europe, but would not permit their stationing in West Germany. This refusal was based on a number of factors: the fierce domestic debate over the Government's decision to equip the Bundeswehr with tactical nuclear systems; Bulganin's suggestion to Adenauer that the Soviet Union would link the reunification issue to the stationing of MRBM's in the Federal Republic; and the fear that deployment of MRBM's could provide a rationale for the withdrawal of American troops.

Likewise, German concern to a large extent stimulated and fueled the LRTNF modernization debate; yet German participation in the proposal was made conditional on the satisfaction of a number of political criteria.

Concern over the appropriate role for nuclear weapons in NATO strategy has produced a number of difficult and testing periods during alliance history.

The collapse of the MLF proposal was followed by a brief period of continuing American nuclear superiority. The perception of this superiority and the somewhat piecemeal arrangement undertaken to satisfy European anxieties provided a lull in the preoccupation with the credibility of the strategic guarantee. This ended, however, with the commencement of the debate over LRTNF. Certain of the original themes such as the European desire for greater participation in the control of nuclear weapons were no longer present; but others, notably the questions of linkage and coupling, of deterrence and warfighting, and defense and détente, reappeared with renewed force.

EVOLUTION OF THE DECISION

1. Alliance Concern

The formation of the Nuclear Planning Group (NPG) in 1967 facilitated the discussion and study within the alliance of various aspects of NATO's nuclear posture. The work of the NPG, and public attention generally, concentrated on the short range or battlefield nuclear systems which formed the preponderant part of NATO's nuclear arsenal. In 1977, however, attention began to focus on the long or medium range component. This change of emphasis was the result of several separate but related factors: first, the perception that strategic parity as codified by the SALT process accentuated existing imbalances at lower levels of forces; second, the development of cruise missiles which, many argued, had considerable potential for NATO defense, particularly as a counter to Soviet theater capabilities; and third, suspicion on the part of many Europeans that the American administration, in order to secure a SALT II agreement, would accept constraints on cruise missiles that would prevent their utilization in the European theater. None of these factors was conclusive. But, in combination, they produced a powerful momentum that led to the process of LRTNF modernization.

European concern over implications for the alliance of developments in the SALT negotiations was catalyzed by West German Chancellor Helmut Schmidt. As previously noted, the Chancellor had long demonstrated an interest in, and understanding of, strategic issues. In his book "Defense and Retaliation," his discussion of graduated deterrence anticipated the evolution of NATO's doctrine of flexible response, and he consistently stressed the need for NATO to maintain a balance of forces with the East. Writing in 1970, he emphasized the direct relationship between the theater and strategic forces.

> Soviet superiority in the Central Sector is further reinforced by about 750 medium range ballistic missiles that have no NATO counterpart. This point more than any other drives home the lesson that, looked at in general and from the theoretical point of view of a conflict extended over a long period of time, there can only be an overall balance in Europe's central sector if strategic nuclear weapons are drawn into the equation.[1]

By the mid-1970's Schmidt had become convinced that this linkage and therefore the credibility of NATO's strategy was being undermined. In a speech to the North Atlantic Council on May 10, 1977, Chancellor Schmidt expressed his concern that,

> * * * the SALT process may lead to a paralyzation of the Soviet and American central strategic forces and that the strategic nuclear component will become increasingly regarded as an instrument of last resort, to serve the national interest and protect the survival of those who possess these weapons of last resort.[2]

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[1] Helmut Schmidt, "The Balance of Power."

[2] "Survival," July/August 1977, p. 178.

During his speech to the International Institute for Strategic Studies (IISS) in October 1977, Schmidt extended his concern to the implication of SALT for other levels of forces, by noting that SALT neutralized the strategic capabilities of the two superpowers and therefore magnified the significance of the disparities between East and West in nuclear tactical and conventional weapons. He emphasized that strategic arms limitations confined to the United States and the Soviet Union would inevitably impair the security of the West European members of the alliance vis-a-vis Soviet military superiority in Europe unless the disparities of military power in Europe were removed in parallel with the SALT negotiations.

The main purpose of the Chancellor's speech was to make public his concern that under the bilateralism of the SALT process, certain aspects of European security were being ignored. Although he nowhere directly referred to theater nuclear forces, his comments focused public attention on the concept that a gap was appearing in NATO's deterrent capability.

The analysis underlying the Chancellor's remarks had been in circulation for some time. Much of the criticism of the SALT process and particularly the emerging SALT II treaty was directed at its implications for the alliance. Critics maintained that Europe was being neglected at two levels: First, they argued that strategic parity as codified by SALT must inevitably undermine the American strategic guarantee; and second, they pointed to the emergence of Soviet systems, notably the Backfire bomber and the SS–20 missile, that were outside the SALT process but were highly relevant to Europe, and of American cruise missiles which would assist Europe, and yet were under discussion in the SALT negotiations. While concern over [illegible] neglect was voiced predominantly by American analysts, it also [illegible] an echo among a number of European observers.

The Soviet "gray area" systems that attracted attention were the Backfire bomber, first deployed in 1974, and most significantly the SS–20 missile. Reference to the existence of the SS–20 emerged in official Western statements during 1975. The 1976 Department of Defense posture statement noted the SS–20 as a new and unique development, the 1977 statement saw its deployment as impending, and the 1978 statement assessed it to be operational.

Public attention was first drawn to the SS–20 in September 1976, when Fred Ikle, who was then the Director of the U.S. Arms Control and Disarmament Agency, commented:

> The specter of such weapons grows like a towering cloud over Europe and Asia. Why are they adding to this arsenal? What must we ask with deep concern is the possible political purpose.[*]

The SS–20 represented a clear increase in capability over the SS–4's and SS–5's. However, differences existed within the alliance concerning the implication of these improvements for alliance strategy. Despite these differences, the SS–20 took on substantial political significance as it became the symbol of NATO's deficiencies in theater nuclear forces and of the need for positive action on the part of the alliance.

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[*] Quoted in "The Security of the Alliance" by Patrick Wall, M.P., a report to the Military Committee of the North Atlantic Assembly, Brussels, November 1976. Ikle's speech had not been authorized and the State Department did not circulate the next.

At the same time that Soviet theater force modernization became a matter of Western concern, American technology was producing a system which many observers believed offered almost unlimited application to the alliance—the cruise missile. The characteristics of the cruise missile—accuracy, invulnerability, and relative low cost—were said to permit its utilization in a wide range of roles. In one of the first analyses to deal in detail with the implications of cruise missile development, Richard Burt, then Assistant to the Director of the IISS, described some of the potential roles:

> In the performance of tactical missions, cruise missiles may provide an attractive replacement for increasingly expensive strike aircraft in the performance of many missions. On land, where aircraft undertaking deep penetrative strikes are increasingly vulnerable to SAM defenses, cruise missiles could become a more cost effective instrument for interdiction and counter air operations. At sea, they might possibly supplant the need for aircraft carriers with their large complements of attack aircraft. Perhaps even more intriguing than the cost advantages that might stem from the tactical use of cruise missiles was that they could carry out tasks now assigned to tactical nuclear weapons.[4]

The 1976 Strategic Survey noted that the U.S. Air Force had commenced studies on the possibility of replacing the F–111's stationed in England with GLCM's. In January 1977, the report by the Director of Defense Research and Engineering, Malcom C. Currie, commented:

> The advent of long range, highly accurate cruise missiles is perhaps the most significant weapon development of the decade * * * the cruise missile represents a high leverage investment which can be fielded at relatively low cost by utilizing existing launch platforms while at the same time forcing the Soviets to divert resources to costly air defense systems.[5]

It was argued that cruise missiles would be of particular interest to France and the United Kingdom in their future planning for the renewals of their independent strategic deterrents. Much of this analysis was based on speculation. Cruise missile development was insufficiently advanced to establish whether performance was as good as claimed and little work had been done to evaluate the cost effectiveness and efficiency of potential application. Nevertheless, Soviet anxieties and American ambivalence concerning the U.S. negotiating position in SALT served to intensify European determination that their options should be safeguarded. In this sense, cruise missile application in the theater nuclear role provided the most politically visible and immediately justifiable rationale for their exclusion from negotiating constraints and became the means for safeguarding the technology for future application.

Suspicion concerning American attitudes toward cruise missiles was not without foundation. Since the Vladivostock agreements which had excluded both the Backfire and cruise missile problems, the Soviet Union had been pressing hard for permanent constraints on cruise missiles, particularly a nontransfer clause.

A number of observers feared that in order to achieve a SALT II agreement, the Ford administration would make a deal including restrictions on cruise missiles.

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[4] "The Cruise Missile and Arms Control," Richard Burt, Survival, January/February 1976.

[5] "Program of Research Development Test and Evaluation, Fiscal Year 1978," statement by the Honorable M. R. Currie, Director, DRE, to the 95th Congress.

This suspicion increased when the new Carter administration took over in 1977 with a commitment to proceed rapidly to a SALT II agreement. Some U.S. officials were in favor of restrictions on cruise missiles. Strobe Talbot, discussing the preparation of the Carter administration March 1977 SALT proposals in his book on the SALT II negotiations, comments that the chief SALT negotiator, Paul Warnke:

> Urged that the United States SALT position contain at least one provision that the Kremlin would welcome and some Pentagon planners would resist. This was to impose strict limits on the range of cruise missiles, particularly ground-launched cruise missiles * * * Warnke could not imagine the Kremlin accepting any new U.S. proposal that left long-range, ground-launched cruise missiles unconstrained.[6]

A number of observers were quick to point out the implications for the alliance of an agreement that included restrictions on cruise missiles. Richard Burt drew attention to the American predicament.

> The most interesting military option available to the West for countering the expansion of Soviet Eurostrategic capabilities is already under discussion at SALT—the long-range precision-guided cruise missile. In deciding whether to exploit cruise missile technology in this manner, the United States must therefore once again choose between placing priorities on strengthening the alliance ties and quickly obtaining a SALT agreement.[7]

Burt developed this approach in a later article, concluding that:

> Over time, many Europeans may conclude that the United States—in order to reach an agreement—has mortgaged systems that are most likely to serve Western rather than American interests.[8]

Concern that the United States should not negotiate away what appeared to be a substantial technological advantage was also expressed in official circles. The 1978 Department of Defense Report commented that:

> Cruise missiles may be tempting candidates for arms control, but because of their versatility and the verification issues they raise, considerable caution needs to be exercised in how they are treated within the framework of SALT.[9]

The efforts of the Carter administration to solve the cruise missile problem through the mechanism of the protocol failed to satisfy the anxieties of either its domestic critics or those of its allies. Confirmation was continually sought that the duration of the protocol would be finite and under no circumstances would be extended. Similar assurances were sought for the ability of the United States to transfer technological "know-how" to its allies. As a U.S. Senate report noted:

> In the 19 formal North Atlantic Council consultations on the progress of the SALT negotiations before the Vienna summit—and in a number of bilateral discussions, especially with the British—the United States was repeatedly asked to clarify the noncircumvention position and regularly reminded of NATO's concern about it.[10]

Allied concern over the American position was reinforced by the initial reluctance of American officials to admit that a theater nuclear problem existed. The reaction of many American officials to European concern over the theater imbalance was to attempt to persuade them that the problem was illusory. These officials argued that it was unrealistic to isolate the theater balance from the overall strategic balance and they stressed that the United States had more than enough central strategic forces to cope with the Soviet medium-range threat. They also made efforts to strengthen existing theater forces by deploying an extra wing of F-111's to the United Kingdom and doubling to 400 the number of submarine-launched reentry vehicles assigned to SACEUR.

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[6] Strobe Talbot, "Endgame, the Inside Story of SALT" (Harper and Row) 1979, p. 57.

[7] Richard Burt, "The SS–20 and the Strategic Balance," The World Today, January/February 1977.

[8] Richard Burt, "The Scope and Limit of SALT," Foreign Affairs, July 1978.

[9] Annual Defense Department Report Fiscal Year 1978, p. 56.

[10] "SALT and the NATO Allies," a staff report to the Subcommittee on European Affairs of the Committee on Foreign Relations, U.S. Senate, October 1979.

During hearings on the SALT II negotiations in October 1977, Secretary of State Vance confirmed that the alliance was taking a close look at its theater nuclear posture, but said that with Polaris and existing forward-based systems no additional long-range ground- or sea-launched systems were required. But, such assurances on the sufficiency of American strategic capabilities were interpreted by several of the allies as self-serving and an attempt to divert European attention from the theater nuclear problem and thus allow the SALT negotiations to proceed undisturbed. Chancellor Schmidt's speech was a warning signal that European interests could no longer be ignored in the strategic negotiations between the superpowers. In fact, his speech reflected a development that was already underway. As a result of European persistence, the United States agreed that the issue needed special examination and a "High-Level Group" was established as the forum for this study.

2. THE HIGH-LEVEL GROUP: ORIGINS AND MANDATE

The High-Level Group (HLG) had its origins in the May 1977 summit of NATO leaders, a meeting at which President Carter called for increased allied efforts across a wide spectrum of defense areas, including TNF modernization. The action program which sprang from this initiative, the long-term defense program (LTDP), included a separate functional area, designated Task Force 10, dedicated to identifying needed remedial measures in the TNF field. NATO assigned the Nuclear Planning Group (NPG) responsibility for managing Task Force 10. At its October 1977 meeting at Bari, Italy, the NPG established the HLG as a subordinate body. The HLG's mandate was to examine the need for NATO TNF modernization, and the technical, military and political implications of alternative NATO TNF postures.

The HLG's work concentrated on the implications of three factors for NATO's strategy of deterrence through flexible response: First, the condition of strategic parity; second, the ongoing modernization of Soviet theater forces; and third, the growing obsolescence of existing NATO theater forces.

The HLG was made up of national officials from 11 member states of the alliance: the United States, United Kingdom, Italy, West Germany, the Netherlands, Norway, Canada, Turkey, Belgium, Denmark, and Greece. It was chaired by the U.S. Assistant Secretary of Defense for International Security Affairs and had no standing staff as such. Rather, it relied on existing NATO Defense Ministry staffs, with most staff work in advance of meetings done in Washington. Members of the HLG were drawn from the senior echelons of ministries of defense and were from diverse backgrounds in terms of functions.

In the course of HLG's examination, a number of important guidelines emerged:

—The LRTNF decision should reflect an "evolutionary" rather than radical change in NATO's defense posture. Thus it would not entail any increase in importance in the role of nuclear weapons in allied defense or any change in the strategy of flexible response; nor would it produce any change in the overall total of nuclear weapons in the European theater.

—A direct matching capability to the SS–20 was not considered necessary, but merely an offsetting capability to provide a credible response; this requirement determined that the systems chosen should have range sufficient to strike targets in the Soviet Union from Western Europe.

—To satisfy public perceptions concerning the credibility of response, it was considered that the systems should have as much visibility as possible. Hence a preference for land-based systems.

—Survivability—and thus mobility—penetrability, and high accuracy were also emphasized.

—Finally, it was assumed that a mix of systems would provide an optimal synergistic effect. While it was recognized that visibility inevitably compromises survivability, the need to enhance the credibility of response was considered sufficiently important for this aspect to be given priority.

Beginning in late fall 1977, the HLG conducted an exhaustive examination of the various technical options, the cost effectiveness of the specific force mixes, and their associated penetration and survivability factors. The HLG examined the possibility of modernizing and/or augmenting existing aircraft and SLBM types. By mid-1978 the HLG had reached a consensus that TNF modernization should include the deployment on the continent of additional improved long-range nuclear weaponry specifically capable of reaching Soviet soil. Its attention then focused on force mixes drawing upon the following three LRTNF weapons systems:

A. PERSHING II EXTENDED RANGE (ER) MISSILE [11]

The Pershing II was originally planned as a replacement for the Pershing 1A (P–1A)[12] currently deployed with the United States and West German forces. 108 P–1A launchers are deployed with American Army units in the Federal Republic and 72 launchers with the Air Force of the Federal Republic.

Initially the Pershing modernization program had as its objective improved accuracy and lower yield in order to reduce collateral damage and provide a more credible theater nuclear interdiction capability. In 1977 following recommendations from the Secretary of Defense and SACEUR—then General Haig—the requirement for a substantial increase in range was generated. The range of the Pershing II ER will be close to 1,000 miles as opposed to 400 miles for the 1A.

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[11] This study provides a general description of the technical characteristics of the LRTNF systems. A more detailed technical study is currently being prepared by the General Accounting Office for the Subcommittee on Europe and the Middle East.

[12] The Pershing missile was first deployed in Europe in 1962 to provide medium range nuclear support to NATO forces. The original Pershing was a mobile system with a large 60–400KT warhead and a range of about 100–400 nm. Deployment of an improved system—the P–1A—was carried out from 1969 to 1971.

The Pershing II ER will have a new two-stage missile and reentry vehicle (RV) and will use a modified version of the present erector/launcher and other ground support equipment. Following SACEUR's recommendation, the Pershing II will resemble the 1A as closely as possible. The main physical difference will be weight, the new missile being approximately 15,500 lbs as opposed to approximately 10,000 lbs for the 1A.

Unlike the Pershing 1A, which follows a ballistic trajectory from RV separation to the target, the P–II's RV will be terminally guided to the target by an onboard radar. The all-weather radar will be activated during the terminal phase of flight to correlate radar returns from the area surrounding the target with a prestored reference map of the target area. Successive corrections during RV descent are expected to achieve accuracies of between 20 to 40 meters CEP compared with 400 meters CEP for the Pershing 1A.

The Pershing II will use either the W–85 or W–86 warheads either of which can employ selectable yields. The higher accuracy of the P–II will allow the use of lower yields for a given mission.

During peacetime, Pershing II's will be deployed in casernes at quick reaction alert (QRA) sites, and will disperse during crisis conditions to their firing positions. While the Pershing II continues to be support and manpower intensive, its reaction time and deployment time on the move has been considerably speeded up.

The basic Pershing II firing unit is a platoon consisting of three erector launchers with one missile per launcher and associated ground equipment. The Pershing II is still in the development stage and thus expected improvements remain to be achieved. The earliest initial operational capability (IOC) for the system is August 1983.

The United States is preserving a short-range version of the P–II to meet FRG or other NATO requirements. U.S. officials have indicated that while no formal demand has been made, they expect the FRG to buy the single-stage version of the P–II particularly as the FRG has bought all previous improvements to the Pershing and as the FRG has budgeted out-year funds to upgrade its Pershing force.[13]

B. THE GROUND-LAUNCHED CRUISE MISSILE (GLCM)

Many observers believe that the evolution of cruise missile technology in terms of accuracy, penetration, and survivability offers substantial potential for improving NATO's defense capabilities.[14] Having examined the air, ground, and sea-launched options for cruise missiles, the HLG decided that the ground-launched version offered the optimum solution.

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[13] See the statement by Dr. Percy A. Pierre, Assistant Secretary of the Army, to the Subcommittee of the Committee on Appropriations, U.S. House of Representatives, Apr. 15, 1980.

[14] For discussion of the potential application of cruise missiles within NATO, see the forthcoming Brookings Institution study on cruise missiles.

The GLCM will be a version of the Tomahawk cruise missile adapted for launch from air transportable, ground mobile platforms. It is powered by a turbofan engine. Guidance is by inertial navigation with terrain contour matching (Tercom) updates at periodic intervals. Flying at a speed of around .8 mach at an altitude of below 100 meters, the GLCM's operational range will be approximately 2,500 kms with an anticipated terminal accuracy of less than 80 meters CEP.

GLCM's will be deployed with American Air Force units. The missiles will be transported four to a launch platform. Four transporter/erector/launchers (TEL) with 16 missiles controlled by two launch control centers will constitute a fire control unit or flight.

The GLCM will use the W-84 warhead which provides selectable yields.

Similar to the Pershing II, the prelaunch survivability of the GLCM derives from the system's mobility. Unlike the Pershing, the GLCM will be deployed during peacetime at permanent sites in hardened shelters capable of withstanding blast effects at up to 2,000 p.s.i. Given warning time, the GLCM could move from its main operating base to a field location.

As with Pershing, many of the performance objectives of the GLCM have still to be fulfilled in testing. Reports have suggested two particular problems regarding the Tercom guidance system: First, to date the cruise missile has not been tested over terrain representative of potential operational areas—much of the terrain which the missile would almost certainly traverse—western parts of the Soviet Union—are very flat and lack the distinctive contours for which Tercom is best suited; second, the provision of the maps necessary for Tercom may be a more difficult problem than previously assumed.

The IOC for the GLCM in Europe has been given as December 1983. However, Department of Defense officials have recently indicated a 6-month delay in the testing of GLCM due to technical difficulties in the computer and communications equipment. This raises the question of a slippage in the IOC.

C. THE SEA-LAUNCHED CRUISE MISSILE (SLCM)

While it was acknowledged that the land attack sea-launched cruise missile (SLCM) had a number of advantageous characteristics, particularly in terms of survivability and deployment flexibility, it was thought to lack the political visibility considered essential for TNF modernization. Furthermore, the cost of providing dedicated platforms seemed likely to make the SLCM option too expensive. However, substantial interest in the SLCM option continues to be demonstrated and further LRTNF deployments by the alliance could involve SLCM deployment. The United States has continued development of several versions of the Tomahawk SLCM (antiship and land attack, nuclear and conventional) for deployment on both submarines and surface ships. The DOD has programed the eventual procurement of 243 antiship SLCM's and 196 land attack SLCM's for deployment on 33 688-class attack submarines and 15 963-class destroyers. For fiscal year 1981 Congress authorized the procurement of 50 Tomahawk

SLCM's. The DOD is also conducting a critical review of the possibility of converting eight Polaris submarines into cruise missile launch platforms.

D. A NEW MOBILE MEDIUM-RANGE BALLISTIC MISSILE (MRBM)

The Department of Defense developed a detailed plan for a mobile MRBM in the spring of 1979. However, after congressional criticism of unnecessary duplication in TNF programs, the MRBM was dropped from the Air Force budget.

3. THE HLG's PROPOSALS

During the meeting of the NPG in Florida in the spring of 1979, NATO Defense Ministers agreed in principle to the concept of a deployment in the early 1980's of some 200 to 600 warheads for long-range theater delivery. It was agreed that a final decision would be taken in December 1979. In the intervening months, final details concerning numbers and types would be established, the program would be integrated with an arms-control approach and acceptance of the plan by all allies achieved.

The final HLG recommendation was for the deployment of a total of 572 nuclear missiles in 5 European countries; 108 Pershing II launchers and 24 GLCM launchers (96 missiles) in the Federal Republic of Germany; 40 GLCM launchers (160 missiles) in the United Kingdom; 28 GLCM launchers (112 missiles) in Italy; 12 GLCM launchers (48 missiles) in Belgium; and 12 GLCM launchers (48 missiles) in the Netherlands.

There has been considerable speculation concerning the choice of the number 572. NATO officials have stressed that the figure was not "drawn from a hat" as some observers have suggested, but was an informed judgment based on a number of widely assorted factors such as system availability, in-flight reliability, penetration capability, risks on the ground, target coverage, cost, the need to make a major impact on Soviet perceptions, and arms control considerations.

NATO officials have also emphasized that the deployment of a mix of Pershing II's and GLCM's not only offered a force of high accuracy with great improvements in reliability and accuracy, but also that each system possessed distinctive characteristics that complemented those of the other. Pershing II offers a very high assurance of penetrating Soviet air defenses, the capability of striking time-urgent targets, and particularly important, the opportunity to take advantage of the existing Pershing I-A infrastructure. GLCM will have lower life-cycle costs and longer range, providing the capability of attacking a wider range of targets from several different bases thereby increasing the opportunity for participation among member countries through deployment on their soil. In addition, it was pointed out that the deployment of a mixed ballistic/cruise missile force hedges against the failure of one type of system, provides the flexibility to select the best weapon for a given mission while complicating enemy planning.

While the cost of the development and production of these systems (estimated at $5 billion) will be paid for by the United States, the

NATO allies will contribute to the infrastructure and support of the systems through their contributions to the NATO Infrastructure Fund.

The possibility of participating in the operational control of these systems through the "dual key" system, as with the Lance and Pershing missiles currently deployed, was offered by the United States. However, the Federal Republic said from the beginning that it was not interested in dual control, and none of the other prospective host countries finally indicated an interest in purchasing the launch vehicles and sharing in the control. The new systems will therefore be deployed with American forces only and under American command and control. It is possible that the United States will reach bilateral understandings with host governments concerning appropriate consultation in the event of a requirement to fire. But such consultation does not imply any actual inhibition on the capability of the United States to operate the systems.

4. The Political Dimension of Modernization

It is essential to view NATO's decision to modernize its long-range theater nuclear forces within its political context. The evolution of the proposal and the December 12 decision were heavily influenced by a number of political criteria, notably, the question of the nature of deterrence, the condition of East-West relations, European attitudes to nuclear weapons, and the mechanics of alliance cohesion.

The question of strengthening the linkage between the U.S. strategic guarantee and a conflict in Europe was one of the primary considerations behind the modernization proposal. Inevitably, this revived the perennial question concerning deterrence. What level of forces, what degree of certainty, what degree of credibility are sufficient for the purposes of the alliance? Does the strategy of flexible response require a matching capability at every level or merely a capability sufficient to convince a potential aggressor that the risks are not worth the gains?

The conflicting interpretations of deterrence and particularly of the need to enhance the American guarantee to Europe through LRTNF modernization were illustrated in speeches in the autumn of 1979 by Henry Kissinger and McGeorge Bundy.

Speaking to an international conference in Brussels on the future of NATO on September 1, Dr. Kissinger declared that under current strategic conditions, the American strategy of mutual assured destruction no longer afforded a credible deterrent for Europe.

> We must face the fact that it is absurd to base the strategy of the West on the credibility of the threat of mutual suicide * * * if there is no theater nuclear establishment on the continent of Europe, we are writing the script for selective blackmail in which our allies will be threatened, and we will be forced into a decision where we can respond only with a strategy that has no military purpose but only a population destruction purpose.[15]

Kissinger argued, therefore, that in order to restore the credibility of the strategic guarantee, the United States must develop strategic counterforce capabilities and credible theater nuclear forces.

McGeorge Bundy, in a keynote address to the IISS conference a week later, took a somewhat different approach, stressing that as nuclear weapons are very different from other weapons, their deterrent value rests on the unacceptable and unpredictable threat of their use, something that is not affected by marginal changes in overall numbers. Moreover, the credibility of the American deterrent rested chiefly on the presence of 300,000 American troops in Europe.

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[15] Dr. Kissinger's remarks as quoted in Survival, November/December 1979, the International Institute for Strategic Studies.

> The strategic protection of Europe is as strong or as weak as the American strategic guarantee, no matter what American weapons are deployed under NATO * * * The enduring effectiveness of the guarantee has not depended on strategic superiority. It has depended instead on two great facts: the visible deployment of major American military forces in Europe, and the very evident risk that any large scale engagement between Soviet and American forces would rapidly and uncontrollably become general, nuclear, and disastrous * * * no one knows that a major engagement in Europe would escalate to the strategic nuclear level. But the essential point is the opposite; no one can possibly know it would not. Precisely because these weapons are different, and precisely because the existing balance in Europe is endurable to both sides, even a small risk of a large nuclear exchange is much too much.[38]

These speeches summarized the different perspectives that dominated the debate over the need for LRTNF modernization. On the one hand, it was argued that extended deterrence could no longer rely on a strategy of mutual assured destruction and that credible war fighting options were now required, particularly at the theater nuclear level. On the other, it was maintained that deterrence continued to rest on the awful and unpredictable nature of nuclear weapons which would insure that the risks entailed in their use would always outweigh the gains. Marginal adjustments, as in the addition of nuclear weapons to European territory, would not affect the bipolar nature of deterrence. Much of the argument for and against LRTNF modernization centered around these different propositions—but as neither are provable, both depended on subjective interpretations of intentions and capabilities as well as the essential nature of deterrence.

The LRTNF proposal also focused attention on the problem for the alliance of striking a correct balance between the military demands of a credible deterrence strategy and the political requirements of assuring a stable and harmonious environment with which all aspects of the East-West relationship must operate.

The adoption by NATO of the twin tenets of defense and détente has meant a continual adjustment between the insurance and reassurance elements of its defense doctrine. The level of military preparations necessary to deter the Soviet Union and to "insure" the alliance is continually influenced by the need to demonstrate and "reassure" the Soviets of the nonaggressive and reactive nature of these military actions. The defense and détente platform has meant that in the search for greater stability, considerable emphasis has been placed on dialog and negotiations. NATO nations acknowledge the need to upgrade their armed forces in order to maintain a credible deterrent, and also to deny the Soviet Union a "droit de regard" over such actions. But at the same time, they are aware of the advantages of maintaining a balanced and harmonious relationship with the East, and of the adverse consequences a deterioration in East-West relations would bring. In this respect LRTNF modernization has posed a classic dilemma between the conflicting demands of defense and détente.

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[38] Ibid.

NATO attempted to resolve this dilemma by stressing that in the December 12 decision, it was not provoking a further escalation in the nuclear arms relationship between East and West, but was "closing the gap" in theater nuclear forces—a gap created by Soviet TNF modernization. This emphasis on the reactive nature of the NATO modernization proposal necessitated a parallel declaration by the alliance of the willingness to establish an acceptable balance in theater nuclear forces through arms control negotiations.

The general aversion to nuclear weapons that existed among important sections of public opinion in several European countries was also an important factor in the evolution of an arms control approach. The arms control element was considered essential in order to gain parliamentary and public support for the NATO proposal in several countries, particularly those where the system would be based. A clear indication of the likely public reaction to the introduction of the new missiles had already been given by the widespread opposition to the proposed introduction of the enhanced radiation warhead (ERW). While the issue of LRTNF modernization was of a different nature than that of the "neutron bomb," substantial opposition could be anticipated in the leftwing of the SPD, on a widespread basis in the Netherlands and to a lesser but unpredictable extent in Belguim. Moreover, it could be expected that the traditional "no nuclear" policies of Norway and Denmark would complicate their endorsement of the proposal. Three of these governments, Belgium, Denmark, and the Netherlands, had relatively fragile coalition governments which could be vulnerable to an issue such as deployment of nuclear missiles.

The likelihood of strong public reaction against the deployment of additional land-based nuclear missiles indicated one of the paradoxes of the modernization proposal—while the technical experts argued that visibility was necessary in order to enhance deterrence, it was precisely this visibility that would cause the adverse public reaction.

While concern over the situation in theater nuclear forces was expressed in a number of alliance quarters, German officials, as previously discussed, were preeminent in voicing their anxieties. They adopted a positive and at times forceful attitude on the question of modernization and on the duty of all members to act decisively and responsibly on this issue. However, the West German Government qualified its position regarding modernization with a number of conditions aimed at minimizing any adverse effect in the political sphere.

These conditions reflected Germany's sensitivity concerning its position in the alliance and its position vis-a-vis its Eastern neighbors. In other words, the desire to enhance German security through modernization was matched by an acute awareness of the need not to jeopardize the political gains Bonn had achieved in terms of improved relations with the East.

The terms of "political burden sharing" on which the Federal Republic of Germany made its participation conditional were:

—That NATO should decide on new systems on the basis of a unanimous decision—no negative votes and no abstentions.

—That the plan for LRTNF deployment plan must include, at a minimum, one continental nonnuclear state in addition to the Federal Republic; this criterion was termed the nonsingularity principle.

- That the Federal Republic had no intention of becoming a nuclear state or of playing any leadership role in questions of nuclear strategy. In this respect, German officials stressed that it was the responsibility of the United States to take the lead in nuclear decisions within the alliance.
- That any systems capable of striking Soviet territory and based in the Federal Republic would remain exclusively under American control with Germany providing only financial support and operating facilities. Unlike the arrangements for Pershing 1A, there would be no dual key arrangement for Pershing II.

Bearing in mind the nuclear status of the United Kingdom and France, the no-nuclear-weapons policies of Norway and Denmark and current domestic problems in other member countries, the German participation criteria clearly focused attention on the Netherlands, Belgium, and Italy.

German officials referred frequently to the collective responsibility inherent in membership of the alliance and of the duty of all members to share equitably the risks and burdens of collective defense. However, given the political conditions in Belgium and the Netherlands, the German criteria were bound to cause difficulties for both governments. In view of the German role in instigating the need for modernization and then imposing its own conditions, a degree of resentment on the part of the smaller countries was inevitable—equality of risk, it was argued, should not necessitate equality of paranoia.

In the case of the United States, the LRTNF decision became a test of American leadership within the alliance. Given perceptions of American vacillation and uncertainty in other fields and the legacy of the ERW episode, LRTNF modernization was viewed as an opportunity for the United States to demonstrate its ability to lead the alliance, particularly in the crucial area of nuclear weaponry, and for the alliance to show its ability to respond to this leadership. While initially reluctant to concede to European urgings on the need for modernization, once the process had begun Amercian officials were determined that it should succeed.

This determination was also reflected among NATO and national officials alike, partly the result of a similarly strong resolve that LRTNF modernization should not follow the same course as the ERW. Agreement on the modernization proposal was increasingly viewed in terms of NATO's ability to cope with the challenges of coalition decisionmaking, and to act responsibly and with unanimity on an issue of great significance and sensitivity. In this respect, the proposal eventually developed a momentum of its own as officials stressed that the process was so far advanced that failure to achieve a positive consensus would represent a serious set back for the alliance. As one observer has noted:

> In its extreme form, this view held that whatever military program was eventually decided on would, in the long run, be less important than the taking of the decision itself."[37]

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[37] "The Role of Nuclear Weapons in Alliance Strategy," Klaas de Vries, report to the Military Committee of the North Atlantic Assembly, November 1979.

Considerable pressure was exerted in the months immediately preceding the December 12 decision by American and NATO officials in order to sustain the official consensus. Consultations and meetings at a variety of levels were intensified to insure that a unanimous decision would be obtained.

The preparatory work done by the HLG on the strategic, military, and technical considerations of LRTNF and the degree of consultation involved, was extremely thorough and reflected well on the ability of the alliance to develop a collective and coherent response on such a complex and sensitive issue. But, the irony of the LRTNF modernization process was that this success was restricted to the level of government officials and did not extend to parliamentary and public opinion. The consultation and cooperation had been at the level of bureaucratic and technical experts, whose mandate had not extended to the political implications of a modernization proposal. As a result, a gap existed between what military and civilian officials believed to be the most appropriate solution and what political circumstances were likely to permit. Only when a precise formula emerged from the HLG for Ministerial and Cabinet approval was serious attention given to public and parliamentary opinion. In several countries, the NATO proposal was introduced into the official governmental and parliamentary domain at a relatively short period before the NATO decision was due to be taken. When the modernization proposal did become an issue of public debate, it was clear that domestic opposition existed in several countries, particularly the Netherlands, Belgium, and Denmark, each of which had relatively fragile coalition governments.

Thus the consensus that had been carefully developed at the official level was seriously threatened by domestic political reaction in several countries. This situation illustrates one of the problems that NATO must face in dealing with nuclear issues—the appropriate point at which questions of nuclear strategy and capabilities should become issues of public discussion.

Finally, the Soviet reaction was an important element in the political context within which the modernization decision was taken. The issue of American nuclear systems based on the periphery of the Soviet Union—the so-called forward based systems (FBS)—had long been a major source of concern to the Soviet Union, and predictably, Soviet officials reacted forcefully to the suggestion that new and more accurate systems capable of striking Soviet territory would be deployed in Europe.

While Soviet officials provided a variety of arguments against the NATO proposal, their statements consistently stressed three points: That a balance of forces existed in the European theater, which the NATO proposal would disturb; that ongoing Soviet TNF modernization did not represent any change in the current equilibrium, and further that the number of Soviet medium-range carriers in the European sphere had decreased overall; that the Soviet Union was prepared to make further reductions in its medium-range carriers and negotiate limitations but only if NATO did not approve the modernization proposal.

Soviet officials focused considerable attention on the European members, particularly the Federal Republic of Germany, stressing that a modernization decision would inevitably have an adverse impact on East-West relations. They also asserted that the modernization proposal was being forced on the Europeans by the United States and was part of an American design to achieve strategic superiority and create another spiral in the arms race.

The Soviet campaign both helped and hindered the course of the LRTNF proposal. In one sense, the Soviet campaign had the reverse effect of what Soviet officials intended and strengthened the position of those in the alliance in favor of a modernization decision. Soviet pressure enabled alliance officials to argue that NATO must not allow its decisionmaking process to be influenced by Soviet tactics and propaganda.

In another sense, however, the Soviet campaign indirectly hindered the NATO decision as it tended to obscure the deep-seated opposition that existed in several European countries, not only toward nuclear weapons in general, but also toward what was seen by many as an unnecessary escalation in the arms race. Domestic opposition in several European countries was frequently dismissed as purely Soviet-inspired with the result that the genuine problems that several governments faced were underestimated.

Despite the persistence and the intensity of the Soviet campaign against modernization, Soviet officials do not appear to have realized until very late that NATO was likely to reach agreement on the modernization proposal. The major speech by Brezhnev on October 6, 1979, which not only summarized the Soviet position but also contained several arms control initiatives, was a case of too little too late. It lacked the one proposal that might have successfully diverted NATO from the December LRTNF decision—an offer to freeze deployment of the SS–20. Had the Soviets made that offer, the December consensus would have been extremely unlikely.

As it was, alliance reaction to the Brezhnev proposals varied from highly skeptical in the United States to mildly positive in several European capitals. The Soviet move nonetheless strengthened the hand of those who argued that the evident extent of Soviet concern would enable the alliance to win substantial concessions in the forthcoming negotiations. The Brezhnev initiative therefore had little or no impact on the course of alliance policy. In the words of a senior British official,

> Mr. Brezhnev may perhaps reflect that the ERW success was, in the end, dearly won, in that it perhaps taught the NATO Allies sharp lessons which they applied successfully to a much larger issue.

5. THE WORK OF THE SPECIAL GROUP (SG)

While the HLG was conducting its examination and alliance members were formulating their political criteria for participation in an eventual LRTNF decision, a growing body of opinion within the alliance came to recognize that NATO should not embark upon a major nuclear weapons program in isolation of arms control considerations. Public and parliamentary support for modernization could only be assured if the alliance demonstrated a willingness to close the gap through arms control negotiations. It was important to underline the continued commitment of the alliance to the twin objectives of defense and détente. In addition, alliance officials perceived that it would not be in the NATO's interest to engage in an unrestrained arms race with the Soviet Union in theater systems.

German officials in particular stressed that achieving limitations on Soviet theater forces should be a primary objective for the alliance.

In April 1979, NATO established a special group (SG) to examine the arms control implications of a LRTNF decision in parallel with the work at the HLG. The SG consisted of arms control specialists from all alliance countries except France, and was chaired by the Director of Political-Military Affairs of the U.S. State Department.

The task of the SG was to develop an approach parallel to the work of the HLG so that the defense decisions of the HLG were not held hostage to expectations on arms control agreements, but also so that arms control itself had a reasonable chance of success. It was accepted that the work of the HLG constituted the basic point of reference for the SG.

The SG developed the following principles as basic guidelines for the United States in arms control negotiations involving TNF:

(1) LRTNF arms control negotiations should be complementary to and not a substitute for LRTNF modernization. The HLG had identified the need for an evolutionary upward adjustment in LRTNF and this modernization requirement existed independently from arms control. Arms control negotiations would be neither realistic nor possible without an agreed modernization plan and a decision to implement it.

- —A decision in principal on modernization but suspending implementation temporarily, pending progress in arms control, would not be in NATO's interest. Postponement of the decision was proposed in a number of the small countries, particularly by certain sections of the social democratic parties. It was countered, however, by the argument that a postponement on these terms would mean that NATO defense planning was dependent on Soviet willingness to negotiate—an unacceptable position.
- —Arms control negotiations could lead to a downward adjustment in NATO's LRTNF requirements, but, as negotiations were unlikely to eliminate the Soviet LRTNF threat, NATO LRTNF modernization would be necessary. If and when arms control results were achieved, the alliance could decide whether to modify the scale of its LRTNF deployments. This guideline acknowledged the position of those who sought the so-called zero option or at least wished to minimize the deployments. However, it made it clear that such an outcome was not likely.

(2) LRTNF arms control negotiations should be conducted within a SALT III framework.

(3) Negotiations in SALT III on LRTNF should involve close and regular consultation within the alliance in an appropriate manner.

(4) LRTNF negotiations and MBFR should be consistent and mutually supportive.

(5) LRTNF negotiations should insure de jure equality in ceilings and in rights. It was particularly important for the alliance to maintain the principle of equality with the East even if it chose not to exercise this right.

(6) LRTNF reductions or limitations should be verifiable.

The special group also reached a number of tentative conclusions concerning the immediate objective for LRTNF negotiations:

(1) The negotiations should be a step-by-step process focusing on narrow and selective areas, rather than attempting a comprehensive approach which would multiply the difficulties and complexities involved and minimize the chance of progress.

(2) The first step of this approach would be to focus on limiting and reducing the most serious and immediate threat to NATO, the Soviet land-based missile force, particularly the SS-20.

(3) The aim should be to achieve a reduction in the overall threat of the land-based missile force by limiting SS-20 deployment, and insuring the retirement of the SS-4's and SS-5's.

(4) The effective unit of limitation should be the numbers of warheads on launchers; thus an SS-20 launcher would count as three because its missile carries three warheads, an da GLCM launcher would count as four because each launcher has four missiles each with one warhead.

(5) Limitations should apply to worldwide land-based LRTNF deployments, but with regional subceilings on systems located within striking range of NATO.

(6) To avoid complex and prolonged negotiations, long-range aircraft would not initially be included, but serious consideration should be given to addressing this problem in future negotiations. Backfire, however, did pose a particularly serious problem and careful consideration should be given to ways in which Backfire could be constrained in the SALT III context, without jeopardizing the possibility of obtaining limits on the long-range missile threat.

The SG's work contained a number of significant ambiguities which would clearly require further study and clarification:

(1) The adoption of a very restrictive step-by-step approach which concentrates on land-based missiles is the most practical formula and the one most likely to achieve visible progress. But it is argued that such an approach distracts attention from the wider and more serious question of the across-the-board Soviet TNF modernization; criticism of a different nature suggests that isolating a specific category of systems will effectively formalize the existence of a separate regional balance, a development which Europeans, particularly the Germans, are anxious to avoid.

While negotiations which dealt comprehensively with all nuclear systems in Europe and aimed for a collective parity in overall totals of all nuclear warheads, including strategic, would be politically desirable, it would be the most difficult to achieve.

(2) The precise level of SS-20's that the alliance could tolerate or "live with" has not been established, nor the corresponding numbers of NATO LRTNF then required.

(3) Establishing a de jure right to equal ceilings may create pressure on NATO to build up to those ceilings rather than accept permanent de facto asymmetry.

(4) It is not clear whether the ceilings on land-based LRTNF would be SS-20 only or whether it would also include SS-4's and SS-5's.

6. RATIONALE FOR THE NATO PROPOSAL

Before examining the December 12 decision and its immediate consequences, it is worthwhile to review in detail the various rationales underlying the HLG's proposal—many of which have already been alluded to—as well as the criticisms directed at the NATO position.

During the course of the LRTNF debate, a number of separate but related rationales were advanced to justify deploying additional long-range systems in Europe. These included: to compensate for the consequences of strategic parity on the theater balance; to close the gap in theater nuclear forces caused by the substantial ongoing modernization of Soviet theater nuclear forces, particularly deployment of the SS–20 missile and the Backfire bombers; to replace existing obsolescent alliance systems; to reinforce the alliance strategy of deterrence through flexible response thereby provide additional political reassurance concerning the credibility of NATO's capabilities; and finally to demonstrate the ability and willingness of the alliance to act effectively and cohesively in the face of Soviet force expansion, and of the United States to exert its leadership role within the alliance.

The central argument for LRTNF has been based on the changing strategic relationship between the two superpowers, the perceived consequences of strategic parity as codified by the SALT process. Under conditions of strategic parity it is suggested that the functions of central strategic systems are confined to deterring either side from their use. In the current strategic environment, the U.S. guarantee to employ strategic systems in response to aggression against Europe is inevitably weakened. Accordingly, it is argued that under strategic parity existing asymmetries at the theater and conventional levels become more significant and should be rectified.

In this respect, the theater balance is now regarded by many as being adversely asymmetrical due largely to recent Soviet modernization of its theater forces with the SS–20 mobile missiles, the Backfire bomber, and a new generation of Soviet tactical aircraft capable of carrying larger payloads over greater ranges. While it is obvious that these Soviet medium- and long-range nuclear systems represent a clear improvement in capability over existing systems, what is in dispute is precisely the question of whether they represent such a quantum jump in capability as to necessitate a response from the West.

Proponents of LRTNF modernization argue that the SS–20 gives the Soviet Union an in-theater "selective" targeting capability that it previously lacked. The improved accuracy and reduced yield of the SS–20's warheads would permit the missile to be used against selective military (counterforce) targets in Western Europe, whereas the SS–4's and SS–5's could only be used against cities (countervalue). Furthermore, the mobility of the SS–20 makes it invulnerable to a counterstrike and gives the Soviet Union added flexibility in usage. Last, the reload capability of the SS–20 suggests to some observers that this weapon system, unlike the SS–4's and SS–5's, is designed for a sustained military campaign.

A more pragmatic case for LRTNF modernization arguably lies in the deficiencies of NATO existing LRTNF systems—SLBM's and long-range aircraft. The limitations of SLBM's have been said to include those of accuracy, flexibility of yield, and targeting; the firing of a single missile would reveal the position of the submarine; and they would not facilitate a "single short" selective response because of the number of RV's on each missile. More significantly, SLBM's are considered too closely associated with the central strategic systems, a factor which might inhibit an American President from using them.

The long-range aircraft which currently complement the SLBM force apparently also have serious deficiencies. They are aging, vulnerable to preemptive attack, and would have difficulty penetrating Soviet air defenses. Under current circumstances, it is argued that NATO's LRTNF lack flexibility and thus do not provide a credible response to the threat posed by the new Soviet systems.

The combination of these factors, it is believed, creates a gap in the deterrence spectrum which the Soviet Union could exploit during a crisis. With its new capability to strike selectively at Europe, the Soviet Union has the potential in a conflict situation to escalate to a level at which NATO, deprived of the American strategic guarantee, would have no credible response. Accordingly, some observers argue that the Soviet Union might be tempted to engage in a preemptive strike disabling NATO's current theater systems trusting that the United States would be self-deterred from retaliating with central strategic systems or with NATO-dedicated Poseidons, thus maintaining a sanctuary status for Soviet territory. For example, Secretary of Defense Brown cautioned that.

> In the face of improving Warsaw Pact forces, we must be alert to the possibility that the Soviets might seek a first strike capability with LRTNF's.[18]

The advantages accruing from this situation are more frequently presented in political/psychological terms than in direct military action. Few observers believe that the Soviet Union would actually use its SS-20's in a first strike role, but they argue that the possession of the capability and the perception of superiority it affords would permit the Soviet Union to extract political concessions from Europe in a crisis.

Finally, while the military rationale, and particularly the threat of the SS-20, was used consistently to gain public support for LRTNF modernization, political and psychological factors provided the predominant criteria for the final proposal. Most officials conceded that the strictly military rationales—other than the renewal of old systems—were not convincing. It is argued that little military advantage, in terms of the total numbers of weapons available and the additional targets that could be covered, would be gained by the deployment of an additional 572 warheads. This aspect was confirmed during a dialog between Senator John Culver and Walter Slocombe, Principal Deputy Assistant Secretary of Defense for Internal Security Affairs. Asked by Senator Culver what military targets that are not now covered would be covered by the longer range capability, Slocomb replied:

> It is not a question of reaching additional targets * * * I want to be quite clear. The requirement for TNF modernization is not principally an issue of hitting new targets.[19]

He went on to emphasize that the main emphasis for LRTNF modernization lay in the psychological aspect of deterrence.

7. CRITICISMS OF THE NATO PROPOSAL

Attitudes toward the proposal to modernize NATO's LRTNF can be divided into four broad categories: Those who believe there is an urgent requirement for a serious NATO LRTNF capability and view the 572 warheads as a totally inadequate response; those who believe that NATO needs a credible LRTNF capability but more for political than military reasons; those who are generally skeptical of the rationales for LRTNF but believe the modernization decision was necessary in order to achieve results in arms control negotiations; and those who reject the rationales underlying LRTNF modernization and argue that the costs of modernization will outweigh any marginal gains. Criticism of the NATO proposal has emanated largely from the first and the last groups.

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[18] Department of Defense Annual Report, Fiscal Year 1980, p. 85.

[19] Hearing before the Subcommittee on Research and Development of the Committee on Armed Services, Apr. 10, 1979.

The first group has criticized the NATO proposal as a totally inadequate response to a serious deficiency and further as hindering serious progress in bringing about the changes necessary to rectify the current imbalance. These critics argue that the NATO LRTNF modernization proposal has focused on a single element of the theater nuclear spectrum, and has thus distracted attention from the real problem facing the alliance in this respect—the across-the-board modernization of all Soviet theater nuclear forces.

> Moscow's nuclear modernization program is not centered around a single system but consists of several new weapons, including the SS-21, SS-22, and the SS-23 battlefield nuclear support missiles, the Backfire medium range bomber, and the SU-19 Fencer attack aircraft * * * a comprehensive approach to theater nuclear modernization must be taken in replacing the alliance's increasingly obsolete nuclear posture rather than taking the piecemeal and ad hoc steps now underway.[20]

Accordingly, these critics contend that the alliance can no longer choose between defense and deterrence. Because of the seriousness of the Soviet military threat and the wide range of military options the Soviet Union now has available, NATO, it is argued, must possess credible capabilities at all levels. This involves strong conventional forces but it also means usable theater and tactical nuclear forces capable of carrying out a wide range of military options. In this sense, the 572 warheads should be seen as only the beginning of a thorough reshaping of NATO's theater nuclear forces.

Criticism of the NATO proposal has been directed at three levels:

(1) In terms of numbers, the introduction of 572 warheads is totally inadequate, representing in General Haig's words, "only political expediency and tokenism."[21]

(2) It is argued that the NATO proposal has distracted attention from the real problem of making the alliance undertake a thorough reappraisal of its theater nuclear strategy in order to evolve a coherent and credible doctrine based on usable nuclear capabilities at all levels.

(3) The offer of arms control negotiations is considered a serious error because: first, NATO has no bargaining leverage and, therefore, the current imbalance can hardly be improved through negotiation; and second, negotiations could produce a number of constraints that could prevent the alliance from carrying out the modernization measures necessary to rectify the current imbalance.

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[20] Richard Burt, "Washington and the Atlantic Alliance," Strength to Weakness, National Security in the 1980's (The Institute for Contemporary Studies, 1980).

[21] Atlantic News, Sept. 12, 1979.

The following comments by William Van Cleave and Charles Marshall illustrate this school of thought:

> Those Pershing II's are going to be distributed among 15 airfields. They have got to be an easy target. They have no reach. This isn't adequate, it seems to me, to compete with what is being proliferated against them. Hoping to make use of them in a tradeoff seems to me the equivalent of a high school football coach hoping to make a player deal with the Dallas Cowboys. (Charles Marshall) [22]
>
> It just doesn't equate with the type of theater nuclear modernization the Soviet Union has engaged in * * *. Cruise missiles are worthless unless they are deployed in large enough numbers and a large enough variety of purposes to saturate defenses because they are easily defended against. And less than 200 cruise missiles between now and the end of 1985 is no threat whatsoever.
>
> Pershing II's merely replace a very old system in small numbers with a new system with very old technology and the same small numbers * * *. Pershing II isn't mobile enough to be survivable * * *. I don't regard these moves as modernization in any way whatsoever. (William Van Cleave) [23]

At the other extreme, there are a number of critics who believe that 572 new warheads are unnecessary. These critics do not accept the thesis that strategic parity neutralizes the deterrent effect of central strategic systems for all situations except a direct attack on the homeland. They believe that the current and projected capabilities of the United States, plus its pronounced willingness to defend Western Europe, are sufficient to deter any Soviet leader from a move that could result in the destruction of Soviet society. For those Europeans who doubt the American commitment, it is difficult to see why a small increment of weapons should make any difference or why they should have more confidence that an American President would release a missile from Europe than from the United States. If indeed this is the case, they argue that rather than strengthening the escalation ladder, such deployments would weaken it by making possible the containment or limitation of a nuclear exchange to European territory.

Concerning Soviet views of the present balance, these critics argue, because the Soviet Union is faced by four major nuclear powers (the United States, the United Kingdom, France, and China), it has specific regional concerns for which it has designed regional forces. However, there is nothing to suggest that the Soviet Union would perceive anything but a continuum of options ranged against itself, from the presence of U.S. nuclear forces in Europe to U.S. central strategic systems. It is therefore difficult, from this perspective, to see why Soviet leaders should perceive an exploitable gap in Western capabilities unless Western critics manage to persuade them.

With regard to the more precise question of the increase in military potential represented by the SS–20, these critics point out that the West has lived under the shadow of 600 MRBM's and IRBM's and hundreds of medium-range bombers for 20 years. They question whether the military characteristics of these systems represent a quantum jump in capability sufficient to justify NATO's LRTNF proposal. Concerning the "selective capability" afforded the Soviet Union by the increased accuracy and reduced yield of the SS–20, they argue that the term "selective" is difficult to appreciate when used to describe the use of 150 KT warheads (each 10 times the yield of the bomb used against

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[22] From Strength to Weakness—National Security in the 1980's, op. cit.
[23] Ibid.

Hiroshima) on a heavily urbanized and densely populated Europe. Any attempt by the Soviet Union to preempt NATO's nuclear assets would comprise, to all intents and purposes, a strategic strike of the most devastating nature.

Under these circumstances, they ask what political advantage could possibly be achieved that would make such an action, with the attendant risk of American strategic retaliation, worthwhile. Thus, if such an action is politically and militarily incredible, why erect a hypothesis of escalation dominance which, in reality, does not exist. These critics therefore believe that, as with "the window of vulnerability," the "escalation gap" in theater forces is visible only to those preoccupied with the narrow and selective world of targeting criteria.

These critics also argue that, as with other areas of technology, the Western advantage in cruise missiles will be short-lived and NATO will then face new problems when the Soviet Union also develops cruise missiles. Furthermore, the introduction of cruise missiles into Europe will severely complicate efforts to obtain limitations on theater nuclear systems.

In summary, then, critics of the LRTNF proposal do not accept that Western perceptions of, and confidence in, the nuclear capabilities of the alliance are being weakened by recent developments at the strategic and theater levels, or that the Soviet Union perceives a theater imbalance which it could manipulate for political advantage. They argue that it is unlikely that any amount of juggling with the geographic location of American nuclear capabilities could ever satisfy the permanent doubters of the American guarantee. This doubt is inherent in the geostrategic structure of the alliance and the physical detachment of the chief guarantor from its allies.

Two final comments should be made concerning criticism of the NATO proposal. First, a number of observers who were sympathetic to the need for LRTNF modernization disagreed with the choice of land-based systems. They have argued that land-based systems were a bad choice because public opinion frequently reacts negatively to the appearance of new nuclear bases and thus sitings could prove difficult in several countries. Furthermore, despite the emphasis on survivability through mobility, the realities of peacetime deployment mean that they remain vulnerable to preemption. Many observers doubt whether, during times of tension, the necessary permission to deploy would be given because of the escalating consequences implicit in such a move.

Second, while skeptical of many of the arguments put forward to justify LRTNF modernization, few of these critics believe that Soviet actions should go unnoticed or unchecked. They would prefer, however, to introduce control and stability through negotiation and would have preferred that these negotiations be tried before the NATO decision. Given Soviet concern and apprehension over the new American systems, they argue that the existence of the programs would have provided a sufficient basis for negotiations.

THE NATO DECEMBER 12 DECISION AND AFTERMATH

1. The Decision

In November 1979, the Defense Ministers of the Nuclear Planning Group approved the findings of the HLG for an "upward evolutionary adjustment" in NATO's LRTNF and forwarded them to the NATO Foreign Ministers for a final decision at the December meeting of the NATO Council.

The realization that a decision to introduce additional long-range systems into Europe would be taken in December caused a flurry of activity in a number of the smaller member countries. In the Netherlands, public debate over the NATO proposal had been underway for a considerable period, and it had long been evident that the Government, faced by opposition within its own party, would have serious problems in supporting the NATO proposal.

The NATO proposal did not cause as intense a public debate in Belgium, although some opposition did surface, particularly within the Flemish Socialist Party. However, the Government was preoccupied with its linguistic and constitutional problems that constantly threaten to divide the country. These issues and the equally pressing economic problems meant that it was always unlikely that the fragile Government would be willing to take a decision on such a sensitive issue as the introduction of new nuclear missiles into Belgian territory. If the last minute hesitation on the part of the Belgians took many American officials by surprise, it was probably because they had assumed that the authority of Foreign Minister Henri Simonet, who had been a strong advocate of modernization, would be sufficient to produce a Belgian endorsement.

The other two countries whose support showed signs of wavering, Norway and Denmark, were in a different position because, due to their "no nuclear weapons" policies, neither country was a candidate for deployment. Nevertheless, because of the principle of unanimity, it was equally important that both these countries agree to the modernization decision.[1] The grassroots reaction that surfaced in several of the parties in both countries apparently reflected a deep-rooted aversion to nuclear weapons and perception that the modernization proposal represented an unnecessary escalation by NATO of the arms race. The opposition in Norway was less threatening than in Denmark, but was serious enough to cause the Norwegian Prime Minister to fly to Washington in order to seek the personal assurance of President Carter concerning the seriousness of the arms control component. The Foreign Minister of Denmark and the Prime Minister of the Netherlands made similar visits. In Denmark, opposition to the NATO proposal was sufficiently strong for the Government to propose formally to its NATO partners a deferment of the December 12 decision.

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[1] Both countries would be required to contribute to the operations and maintenance of the new systems through the common infrastructure fund.

Neither this suggestion, nor the Dutch proposal to separate the production and deployment decisions and postpone the deployment decision pending progress in arms control negotiations, were accepted by the other NATO members. The United States, the United Kingdom, and Germany were adamant that the decision be taken and that there could be no delay. It was argued that to postpone any part of the decision would make NATO modernization plans hostage to the whims of the Soviet Union. In addition, a decision was needed in order to obtain congressional support for continued funding of the programs it was believed that 1980 would be a more difficult year because of elections in the United States and the Federal Republic.

The communique of the December 12 decision[2] reported that all Ministers had agreed to the modernization proposal, but it did not mention the reservations submitted by Belgium and the Netherlands. The Netherlands Government agreed to the reasons for LRTNF modernization, but said it would be unable to decide on deployment in the Netherlands until December 1981. Its decision at that time would be taken in the light of progress made in arms control negotiations on medium range systems.

The Belgian Government, according to the official minutes, noted the consensus of the meeting and endorsed the decision but emphasized that the application of the decision to Belgian territory would have to be confirmed in 6 months. The Belgian confirmation, as with the Dutch, would be taken in the light of progress in arms control.[3]

The position of Belgium remains unclear. Owing to a variety of domestic problems, including a change in the governing coalition in March 1980, Belgium was unable to give its NATO allies a definite decision after 6 months. In September, the coalition reached an agreed position which reiterated that Belgium's decision would depend on progress in the arms control negotiations, but that if the negotiations should fail, Belgium, "In concert with its Allies, will take all measures agreed upon by the NATO partners."

This phrasing was sufficiently ambiguous to allow both supporters and opponents of cruise missile basing to claim victory. While the future course of action by the Belgian Government on cruise missiles is impossible to predict, it is clear that economic conditions will continue to dominate the Government's attention. In this case, the Government's priority will be to insure the continuity of the coalition and avoid any measure that could alienate any of its major partners, including the Flemish Socialists, who have made opposition to cruise missiles a major plank in their platform.

The communique also contained the recommendation that ongoing arms control efforts should now include certain United States and Soviet long-range theater nuclear systems, and the United States should propose to the U.S.S.R. to begin negotiations as soon as possible. A special consultative body at a high level would be constituted within the alliance to support the U.S. negotiating effort.

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[2] For full text, see app. 4.

[3] For a detailed discussion to the background of the Belgian position, see Belgium, app. 3.

The communique also announced the withdrawal during the course of 1980 of 1,000 warheads. This development was partly a response to the Brezhnev initiative of October 6, 1979, when he announced certain unilateral withdrawals and partly to demonstrate that LRTNF modernization will not result in an increase of nuclear warheads in Europe.

2. The Aftermath [4]

The December 12 decision has been acclaimed as an outstanding success for the alliance and a clear illustration of NATO's ability to act cohesively. A closer analysis reveals that such claims may be somewhat premature. The reservations submitted by the Netherlands and Belgium remain to be resolved and could yet hinder the implementation of the modernization decision. Furthermore, the positions adopted by these two countries reflect the existence of a significant body of opinion in Europe which remains uneasy concerning the introduction of additional nuclear missiles. The continued existence of this sentiment and ambiguity surrounding how arms control proposals and negotiations will be managed are further elements of uncertainty regarding the future of the LRTNF program.

The weapons systems are still under development. Implementation details, such as costings, still need to be fleshed out. Thus far, sitings for the new systems have only been decided in the United Kingdom; but those for the Federal Republic and Italy are expected to be announced shortly. Meanwhile, the HLG continues to meet in order to consider other aspects of NATO's nuclear posture. Part of the HLG's mandate was that the 572 LRTNF warheads would be accommodated in the NATO posture without an increase in numbers. The HLG is therefore considering the impact of LRTNF modernization on the rest of the nuclear arsenal and is conducting a systematic review of NATO's nuclear forces. This aspect of the HLG's work has been referred to as the shift study. This concept was initially introduced in an attempt to persuade the Netherlands to support the NATO proposal by suggesting that acceptance of long-range systems could mean a reduction in shorter range tasks for certain countries. But, the current work of the HLG reportedly does not suggest any radical change in the balance between long- and short-range systems in NATO's nuclear posture.

On the arms control side, the strong Soviet reaction to the NATO December 12 decision—they took the position that the NATO decision canceled the basis for negotiations on theater arms control—and their subsequent invasion of Afghanistan with its adverse consequences for United States-Soviet relations appeared temporarily to have closed the door on potential negotiations. Ratification of SALT II, which was looking increasingly questionable even before the invasion of Afghanistan, became a forgotten issue in the immediate aftermath of the Soviet action.

For a period, the Soviet invasion of Afghanistan, and American determination to make the Soviet Union pay a heavy price for its actions dominated the political scene, and arms control faded into the background. European nations, however, were for the most part uneasy about the direction of American policy and reluctant to support actions which in their view would seriously undermine the East-West relationship, particularly the degree of stability in Europe that had been carefully nurtured over the past decade. Several countries were conscious that their support for the modernization proposal had been based on an explicit commitment to arms control and in anticipation that the SALT II Treaty would be ratified. Failure to demonstrate any progress in the arms control part of the decision could complicate their continued support for modernization. Contrary to what might have been expected, Soviet actions in Afghanistan had not diminished the opposition in Europe to LRTNF, nor has it produced any lessening in the belief that arms control remains an indispensable element of Western security.

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[4] The following section provides a general review of the events following the Dec. 12 decision. For more detailed coverage of developments and attitudes in individual countries, see the appendixes on European and Soviet perspectives.

In the transatlantic divergences that emerged over the implications of Afghanistan and what policies the alliance should be following, the FRG was prominent in insisting that dialog and communication with the East should continue. The commitment of the FRG to the arms control objectives of the December 12 decision was demonstrated when, in several campaign addresses, Chancellor Schmidt reiterated the idea of a freeze by both sides on new deployments. As NATO deployment could not begin until 1983, this meant asking the Soviet Union to freeze the deployment of the SS-20. These proposals, and confirmation that the Chancellor was prepared to go to Moscow for talks with Brezhnev, increased the mutual dissension and suspicion already existing between Washington and Bonn. This friction culminated in a letter from President Carter to Chancellor Schmidt cautioning him against taking action that might undermine the NATO decision. As one of the architects of the December decision and as someone who had been preoccupied with this aspect of Western security for many years, the Chancellor reportedly was antagonized by this incident. It was viewed by some as a decidedly low point in relations between the Carter administration and the Bonn Government.

Relations between the two administrations were reportedly improved after the meeting between Carter and Schmidt during the Venice Summit in June 1980, when Chancellor Schmidt clarified his objectives in going to Moscow.

The discussions between Schmidt and Brezhnev breathed new life into the prospects for LRTNF arms control negotiations. The Soviets dropped their rigid insistence that NATO cancel or rescind the December decision, and agreed that preliminary discussions on limiting medium range systems could begin without SALT II being ratified. However, they have made it clear that they did not believe substantial progress was possible without the ratification of SALT II and they stated that American forward based systems (FBS) must be included in the negotiations. Preliminary discussions between the United States and the Soviet Union on the question of negotiating limitations on medium-range arms in Europe commenced in Geneva on October 27.

3. THE SOVIET REACTION

As has been noted the Soviet reaction to the NATO decision was swift and abrupt. Soviet spokesmen denounced the decision, declaring that it destroyed the basis for negotiations and rejected the NATO offer of arms control negotiations. Since December they have continued to criticize the NATO decision using arguments similar to those advanced during 1979. They have also accused the United States of using the Soviet occupation of Afghanistan as an excuse to begin a new arms race.

However, those Western observers who had predicted an eventual softening of the Soviet position were vindicated when, during Chancellor Schmidt's visit to Moscow on June 30–July 1, 1980, the Soviets accepted the principle of beginning negotiations, dropping their insistence that the NATO decision must first be rescinded.

Since the Schmidt-Brezhnev meeting, a number of articles have confirmed the current Soviet position.[5] Soviet spokesmen have stated that they would prefer to commence negotiations on medium-range nuclear systems, according to the proposals submitted by Brezhnev in his October 6 speech. In this respect, they have emphasized that these proposals still stand, but only if conditions are restored to those existing at that time; in other words, only if NATO rescinds its December 12 decision or at least officially suspends its implementation. The other possible forum, in their view, for these negotiations is SALT III and the avenue is obviously blocked now by the nonratification of SALT II.

Under these conditions, the Soviet leaders have proposed a third variant, to begin preparatory talks on medium-range systems without waiting for SALT II ratification and without NATO changing its decision, but with two conditions: first, that American forward-based systems are included and, second, that no understanding can be implemented before the ratification of SALT II. In Gromyko's words,

> * * * the U.S.S.R. recently came forward with the initiative of embarking on a discussion of the question of the medium-range nuclear missiles simultaneously and in organic connection with the question of American forward-based nuclear weapons. It is meant here that possible accords on these questions may be realized in practice only with the entry into force of the SALT II treaty.[6]

Soviet commentators have stressed that, contrary to allegations by certain Western observers, the Soviet Union has not reconciled itself to the NATO LRTNF modernization decision nor has it accepted to negotiate on Western terms. They maintain that the initiative does not represent a change in position, and Soviet articles continue to attack the NATO decision on the ground that the West is attempting to upset the current equilibrium in its own favor.

Two additional points of interest have emerged. First, the Soviets have apparently decided what forward-based systems they would like included in future negotiations. The Pravda editorial of July 15, 1980, states that "hundreds and hundreds of various American carriers of nuclear weapons and bases at which they are deployed are involved." The article refers to American aircraft stationed at airbases in a number of West European countries and on American aircraft carriers and American missile-carrying submarines placed at the disposal of the European NATO Command. Other articles have calculated that the number of NATO's nuclear arsenal in this respect totals about 1,500 units.

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[5] See particularly a July 15, 1980 Pravda editorial and the Gromyko article in the August edition of Kommunist.

[6] A. Gromyko, "Disarmament—An Urgent Present-Day Problem," Kommunist (August 1980).

Second, Soviet officials have continued to downplay the significance of the SS–20 arguing that its deployment does not represent a quantum leap in capability but only the long overdue modernization of obsolescent systems. According to an interview with General Chervov, chief of the Soviet staff,

> Obsolete types of missiles have come to the end of their serviceable life and are being replaced by SS–20 missiles, which are designed to carry out the same tasks. Of course, it would be strange if the new missiles were worse than the old ones, but their tasks and combat potential have remained basically the same.[7]

General Chervov referred to Western allegations that the Soviet Union was not withdrawing older missiles as it deployed the SS–20, and emphasized that in fact one or two obsolete missiles were being withdrawn as one SS–20 was deployed.

Soviet spokesmen have also confirmed that, during the preparatory talks on medium-range negotiations, the Soviet Union was not interested in French and British nuclear forces.

While the Soviet willingness to negotiate has been welcomed by Western leaders, its implications have yet to be fully thought through. Clearly, the potential inclusion of FBS broadens the scope of the negotiations beyond NATO's original concept and will inevitably complicate and prolong negotiations. From the Soviet perspective, prolonged negotiations might appear to offer one way of frustrating implementation of the NATO decision.

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[7] General Chervov, July 21, 1980, interview with "Rude Pravo" (Prague), as reported by the U.S. Foreign Broadcast Information Service, Soviet Union Daily Report, July 24, 1980.

PROBLEMS AND PROSPECTS

A number of serious questions remain to be answered concerning the NATO LRTNF modernization decision and its implications for the future of the alliance. The most immediate issues concern the implementation of both parts of the decision—modernization and arms control—and the closely related positions of Belgium and the Netherlands. In the longer term, the implementation of the NATO decision, and the circumstances under which it is carried out, promise to have significant implications for NATO on a number of levels: for the cohesion of the alliance, for relations between the United States and Europe, and for the broader context of East-West relations. Finally, it could provide the catalyst needed to spur frank and open discussion of the appropriate role for nuclear weapons in alliance strategy in order to form the political consensus that will be needed to support future developments.

The Netherlands is not due to make a decision on deployment until December 1981; and hopes that the Belgian Government would make a positive decision in the near future have now faded. Besides very general references to progress in arms control, neither country has specified the criteria on which it will make its decision. Their future participation in the deployment program must remain very uncertain.

While any prophecy concerning the future action of either country would be pure speculation, few observers are optimistic. Political conditions are not encouraging in either country. Although the constitutional settlement in Belgium has removed one of the Government's major preoccupations, the current Government probably still lacks the political strength to act decisively in such a sensitive area. In the Netherlands, the only chance for a decision in favor of deployment would appear to be the return of a strong conservative coalition in the elections next spring. According to current trends, however, this is not likely.

In the event that neither country agrees to deployment, NATO will have to decide whether to deploy 96 fewer launchers or to ask the other states scheduled to receive systems (the United Kingdom, the Federal Republic, and Italy) to accept additional missiles.

Because Belgium and the Netherlands would not be due to receive their quota of missiles until 1985–86, their current positions do not affect the ongoing implementation of the NATO plan. There is no requirement to begin the necessary preparatory work on sitings and construction that is already underway in the other three NATO countries.

On the arms control side, the recent negotiations in Geneva have been generally welcomed as much needed momentum in this field. But the Soviet condition of including American FBS greatly complicates the situation. The alliance position on arms control evolved by the

Special Group is based on a step-by-step approach focusing on the most threatening and easily identifiable TNF component, land-based missiles, an approach which it is believed is most likely to facilitate positive results. The inclusion of FBS broadens and complicates the negotiations in such a way as to make rapid progress almost impossible.

The question of inclusion of forward-based systems in the TNF negotiations remains a major issue. If NATO maintains its current advocacy of narrowly based negotiation, given traditional Soviet preoccupation with FBS, negotiations might not even be able to agree on an agenda for the talks. On the other hand, if NATO agrees to widen the negotiations and asks for reciprocal inclusion of additional Soviet theater systems, the negotiations could become hopelessly complicated. This choice may be one of the more difficult ones confronting the new Reagan administration.

Irrespective of the problem of FBS, the arms control position evolved by the Special Group contains a number of ambiguities that require clarification: Notably, what level of Soviet medium-range missiles is considered acceptable, and will the limitations apply to all Soviet medium-range missiles or just the SS–20's? What allowance will be made for Soviet non-NATO regional concerns? On what basis are NATO's 572 warheads negotiable?

The continued reluctance of the Belgian and Dutch Governments to agree to deployments could substantially increase intra-alliance tension. Alliance officials, and West German officials in particular, continually emphasize that NATO is an alliance of shared risks and responsibilities in which every partner must play an equal part. However, the smaller countries apparently resent the fact that they are expected to participate in politically difficult decisions whose primary purpose appears to many of their leaders to be to deal with concerns about the reliability of the American nuclear guarantee which they do not share.

The progress of the LRTNF decision could also affect relations between the United States and Europe. A substantial degree of frustration currently exists among American officials and observers at what is perceived as a reluctance by the European Allies to accept and support changes to NATO's defense posture which are considered essential. This perception fuels an already widely held belief that the Europeans are unwilling to assume a realistic responsibility for their own security. Reactions to the Dutch and Belgian reservations in LRTNF deployments have manifested such sentiments. This tension could be increased if further efforts to modernize NATO's nuclear arsenal meet with continued opposition from a number of European members. Current analytical writings and press reports are beginning to discuss Soviet improvements in their short-range nuclear forces, indicating that the next area of emphasis will be NATO's battlefield nuclear systems. Efforts to modernize NATO's battlefield systems could arouse a similar response as that evoked by LRTNF modernization, particularly if it involves the reintroduction of the proposal to deploy the neutron bomb.

Arms control could provide a further area of friction. Thus far, the alliance position toward prospective negotiations on LRTNF has been carefully coordinated. However, as previously noted, differences between Europe and the United States concerning the appropriate emphasis to be placed on further arms control negotiations surfaced in early 1980. These differences were the result of the no-business-as-usual approach of the United States in response to the Soviet invasion of Afghanistan and of the nonratification of SALT II. During the past year, arms control assumed a lower profile in American security considerations. American officials suggest that they are now adopting a more realistic approach to arms control both concerning its objectives and its role in insuring alliance security. In contrast, the current European commitment to arms control is viewed as almost a blind faith which, it is believed, could have results that are counterproductive. Thus, while the alliance will continue to coordinate its position closely through the special consultative group, differences over both pace and content of the negotiations may well appear. A major uncertainty in this area is the change of administrations in the United States. How the Reagan administration shapes its policies toward NATO and arms control issues could either solidify or split the alliance on the TNF question.

The implications for East-West relations and the continued stability of central Europe could also be substantial. The implementation of the NATO decision will likely take place against the background of a number of efforts aimed at reducing tension and increasing military stability in Europe. These include the ongoing Vienna talks on mutual and balanced force reductions (MBFR), the discussion of a variety of confidence building measures at the Madrid followup meeting on security and cooperation in Europe, and negotiations on theater nuclear systems themselves. The implications of the actual deployment by NATO of additional LRTNF will obviously depend on how serious the Soviet reaction is and how successful the arms control negotiations are in obtaining meaningful limitations on either side. But it is a fair bet that deployment by NATO of cruise missiles will be followed by Soviet deployment of similar new systems. Such an escalation in the European theater would severely complicate future arms control efforts.

Finally, the LRTNF modernization decision constitutes a pragmatic compromise between those who believe that European-based nuclear forces have a functional war-fighting role to play and those who argue that their role is purely to enhance deterrence. The decision, therefore, left unresolved a number of deep-seated issues concerning the appropriate role of nuclear weapons in alliance strategy. It did not satisfy those who believe that to be credible, nuclear weapons should be usable; and, it displeased those who regard nuclear weapons as political instruments of deterrence and who believe that the political costs of LRTNF modernization far outweigh the gains in military capabilities. This disagreement on NATO strategy now is more likely to become a public debate. Those who believe that theater nuclear weapons are unnecessary must be prepared to examine and accept the consequences of a strategy without them. If they are necessary, then the alliance must agree to a posture that can be sustained by public opinion. Unless such a consensus is obtained, the alliance will find it increasingly difficult to sustain the credibility of its strategy.

In sum, the end result of the NATO decision to modernize its long-range theater nuclear systems is far from certain. The outcome will depend: On the evolution of the United States-Soviet strategic nuclear dialog; on the overall direction of East-West relations; on the dynamic of relationships within the Western alliance, particularly between European governments and the new Reagan administration; and, on domestic political considerations affecting a number of alliance countries. In any case, it is clear that the unfolding drama could have far-reaching consequences for the Western alliance and for East-West relations for the rest of this century.

McGeorge Bundy
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NUCLEAR WEAPONS AND THE ATLANTIC ALLIANCE

We are four Americans who have been concerned over many years with the relation between nuclear weapons and the peace and freedom of the members of the Atlantic Alliance. Having learned that each of us separately has been coming to hold new views on this hard but vital question, we decided to see how far our thoughts, and the lessons of our varied experiences, could be put together; the essay that follows is the result. It argues that a new policy can bring great benefits, but it aims to start a discussion, not to end it.

For 33 years now, the Atlantic Alliance has relied on the asserted readiness of the United States to use nuclear weapons if necessary to repel aggression from the East. Initially, indeed, it was widely thought (notably by such great and different men as Winston Churchill and Niels Bohr) that the basic military balance in Europe was between American atomic bombs and the massive conventional forces of the Soviet Union. But the first Soviet explosion, in August 1949, ended the American monopoly only

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one month after the Senate approved the North Atlantic Treaty, and in 1950 communist aggression in Korea produced new Allied attention to the defense of Europe.

The "crude" atomic bombs of the 1940s have been followed in both countries by a fantastic proliferation of weapons and delivery systems, so that today the two parts of a still-divided Europe are targeted by many thousands of warheads both in the area and outside it. Within the Alliance, France and Britain have developed thermonuclear forces which are enormous compared to what the United States had at the beginning, although small by comparison with the present deployments of the superpowers. Doctrine has succeeded doctrine, from "balanced collective forces" to "massive retaliation" to "mutual assured destruction" to "flexible response" and the "seamless web." Throughout these transformations, most of them occasioned at least in part by changes in the Western view of Soviet capabilities, both deployments and doctrines have been intended to deter Soviet aggression and keep the peace by maintaining a credible connection between any large-scale assault, whether conventional or nuclear, and the engagement of the strategic nuclear forces of the United States.

A major element in every doctrine has been that the United States has asserted its willingness to be the first—has indeed made plans to be the first if necessary—to use nuclear weapons to defend against aggression in Europe. It is this element that needs reexamination now. Both its cost to the coherence of the Alliance and its threat to the safety of the world are rising while its deterrent credibility declines.

This policy was first established when the American nuclear advantage was overwhelming, but that advantage has long since gone and cannot be recaptured. As early as the 1950s it was recognized by both Prime Minister Churchill and President Eisenhower that the nuclear strength of both sides was becoming so great that a nuclear war would be a ghastly catastrophe for all concerned. The following decades have only confirmed and intensified that reality. The time has come for careful study of the ways and means of moving to a new Alliance policy and doctrine: that nuclear weapons will not be used unless an aggressor should use them first.

II

The disarray that currently besets the nuclear policy and practices of the Alliance is obvious. Governments and their representatives have maintained an appearance of unity as they persist in their support of the two-track decision of December 1979, under which 572 new American missiles of intermediate range are to be placed in Europe unless a satisfactory agreement on the limitation of such weapons can be reached in the negotiations between the United States and the Soviet Union that began last November. But behind this united front there are divisive debates, especially in countries where the new weapons are to be deployed.

The arguments put forward by advocates of these deployments contain troubling variations. The simplest and intuitively the most persuasive claim is that these new weapons are needed as a counter to the new Soviet SS-20 missiles; it may be a recognition of the surface attractiveness of this position that underlies President Reagan's striking—but probably not negotiable—proposal that if all the SS-20s are dismantled the planned deployments will be cancelled. Other officials have a quite different argument, that without new and survivable American weapons which can reach Russia from Western Europe there can be no confidence that the strategic forces of the United States will remain committed to the defense of Western Europe; on this argument the new missiles are needed to make it more likely that any war in Europe would bring nuclear warheads on the Soviet Union and thus deter the aggressor in the first place. This argument is logically distinct from any concern about the Soviet SS-20s, and it probably explains the ill-concealed hope of some planners that the Reagan proposal will be rejected. Such varied justifications cast considerable doubt on the real purpose of the proposed deployment.

An equally disturbing phenomenon is the gradual shift in the balance of argument that has occurred since the need to address the problem was first asserted in 1977. Then the expression of need was European, and in the first instance German; the emerging parity of long-range strategic systems was asserted to create a need for a balance at less than intercontinental levels. The American interest developed relatively slowly, but because these were to be American missiles, American planners took the lead as the proposal was worked out. It has also served Soviet purposes to concentrate on the American role. A similar focus has been chosen by many leaders of the new movement for nuclear disarmament in Europe. And now there are American voices, some in the executive branch, talking as if European acceptance of these new missiles were some sort of test of European loyalty to the Alliance. Meanwhile some of those in Europe who remain publicly committed to both tracks of the 1979 agreement are clearly hoping that the day of deployment will never arrive. When the very origins of a new proposal become the source of irritated argument among allies—"You started it!"—something is badly wrong in our common understanding.

A still more severe instance of disarray, one which has occurred under both President Carter and President Reagan, relates to the so-called neutron bomb, a weapon designed to meet the threat of Soviet tanks. American military planners, authorized by doctrine to think in terms of early battlefield use of nuclear weapons, naturally want more "up-to-date" weapons than those they have now; it is known that thousands of the aging short-range nuclear weapons now in Europe are hard to use effectively. Yet to a great many Europeans the neutron bomb suggests, however unfairly, that the Americans are preparing to fight a "limited" nuclear war on their soil. Moreover neither weapons designers nor the Pentagon officials they have persuaded seem to have understood the intense and special revulsion that is associated with killing by "enhanced radiation."

All these recent distempers have a deeper cause. They are rooted in the fact that the evolution of essentially equivalent and enormously excessive nuclear weapons systems both in the Soviet Union and in the Atlantic Alliance has aroused new concern about the dangers of all forms of nuclear war. The profusion of these systems, on both sides, has made it more difficult than ever to construct rational plans for any first use of these weapons by anyone.

This problem is more acute than before, but it is not new. Even in the 1950s, a time that is often mistakenly perceived as one of effortless American superiority, the prospect of any actual use of tactical weapons was properly terrifying to Europeans and to more than a few Americans. Military plans for such use remained both deeply secret and highly hypothetical; the coherence of the Alliance was maintained by general neglect of such scenarios, not by sedulous public discussion. In the 1960s there was a prolonged and stressful effort to address the problem of theater-range weapons, but agreement on new forces and plans for their use proved elusive. Eventually the proposal for a multilateral force (MLF) was replaced by the assignment of American Polaris submarines to NATO, and by the creation in Brussels of an inter-allied Nuclear Planning Group. Little else was accomplished. In both decades the Alliance kept itself together more by mutual political confidence than by plausible nuclear war-fighting plans.

Although the first years of the 1970s produced a welcome if oversold détente, complacency soon began to fade. The Nixon Administration, rather quietly, raised the question about the long-run credibility of the American nuclear deterrent that was to be elaborated by Henry Kissinger in 1979 at a meeting in Brussels. Further impetus to both new doctrine and new deployments came during the Ford and Carter Administrations, but each public statement, however careful and qualified, only increased European apprehensions. The purpose of both Administrations was to reinforce deterrence, but the result has been to increase fear of nuclear war, and even of Americans as its possible initiators. Intended as contributions to both rationality and credibility, these excursions into the theory of limited nuclear war have been counterproductive in Europe.

Yet it was not wrong to raise these matters. Questions that were answered largely by silence in the 1950s and 1960s cannot be so handled in the 1980s. The problem was not in the fact that the questions were raised, but in the way they seemed to be answered.

It is time to recognize that no one has ever succeeded in advancing any persuasive reason to believe that any use of nuclear weapons, even on the smallest scale, could reliably be expected to remain limited. Every serious analysis and every military exercise, for over 25 years, has demonstrated that even the most restrained battlefield use would be enormously destructive to civilian life and property. There is no way for anyone to have any confidence that such a nuclear action will not lead to further and more devastating exchanges. Any use of nuclear weapons in Europe, by the Alliance or against it, carries with it a high and inescapable risk of escalation into the general nuclear war which would bring ruin to all and victory to none.

The one clearly definable firebreak against the worldwide disaster of general nuclear war is the one that stands between all other kinds of conflict and any use whatsoever of nuclear weapons. To keep that firebreak wide and strong is in the deepest interest of all mankind. In retrospect, indeed, it is remarkable that this country has not responded to this reality more quickly. Given the appalling consequences of even the most limited use of nuclear weapons and the total impossibility for both sides of any guarantee against unlimited escalation, there must be the gravest doubt about the wisdom of a policy which asserts the effectiveness of any first use of nuclear weapons by either side. So it seems timely to consider the possibilities, the requirements, the difficulties, and the advantages of a policy of no-first-use.

III

The largest question presented by any proposal for an Allied policy of no-first-use is that of its impact on the effectiveness of NATO's deterrent posture on the central front. In spite of the doubts that are created by any honest look at the probable consequences of resort to a first nuclear strike of any kind, it should be remembered that there were strong reasons for the creation of the American nuclear umbrella over NATO. The original American pledge, expressed in Article 5 of the Treaty, was understood to be a nuclear guarantee. It was extended at a time when only a conventional Soviet threat existed, so a readiness for first use was plainly implied from the beginning. To modify that guarantee now, even in the light of all that has happened since, would be a major change in the assumptions of the Alliance, and no such change should be made without the most careful exploration of its implications.

In such an exploration the role of the Federal Republic of Germany must be central. Americans too easily forget what the people of the Federal Republic never can: that their position is triply exposed in a fashion unique among the large industrial democracies. They do not have nuclear weapons; they share a long common boundary with the Soviet empire; in any conflict on the central front their land would be the first battleground. None of these conditions can be changed, and together they present a formidable challenge.

Having decisively rejected a policy of neutrality, the Federal Republic has necessarily relied on the nuclear protection of the United States, and we Americans should recognize that this relationship is not a favor we are doing our German friends, but the best available solution of a common problem. Both nations believe that the Federal Republic must be defended; both believe that the Federal Republic must not have nuclear weapons of its own; both believe that nuclear guarantees *of some sort* are essential; and both believe that only the United States can provide those guarantees in persuasively deterrent peacekeeping form.

The uniqueness of the West German position can be readily demonstrated by comparing it with those of France and the United Kingdom. These two nations have distance, and in one case water, between them and the armies of the Soviet Union; they also have nuclear weapons. While those weapons may contribute something to the common strength of the Alliance, their main role is to underpin a residual national self-reliance, expressed in different ways at different times by different governments, which sets both Britain and France apart from the Federal Republic. They are set apart from the United States too, in that no other nation depends on them to use their nuclear weapons otherwise than in their own ultimate self-defense.

The quite special character of the nuclear relationship between the Federal Republic and the United States is a most powerful reason for defining that relationship with great care. It is rare for one major nation to depend entirely on another for a form of strength that is vital to its survival. It is unprecedented for any nation, however powerful, to pledge itself to a course of action, in defense of another, that might entail its own nuclear devastation. A policy of no-first-use would not and should not imply an abandonment of this extraordinary guarantee—only its redefinition. It would still be necessary to be ready to reply with American nuclear weapons to any nuclear attack on the Federal Republic, and this commitment would in itself be sufficiently demanding to constitute a powerful demonstration that a policy of no-first-use would represent no abandonment of our German ally.

The German right to a voice in this question is not merely a matter of location, or even of dependence on an American nuclear guarantee. The people of the Federal Republic have demonstrated a steadfast dedication to peace, to collective defense, and to domestic political decency. The study here proposed should be responsive to their basic desires. It seems probable that they are like the rest of us in wishing most of all to have no war of any kind, but also to be able to defend the peace by forces that do not require the dreadful choice of nuclear escalation.

IV

While we believe that careful study will lead to a firm conclusion that it is time to move decisively toward a policy of no-first-use, it is obvious that any such policy would require a strengthened confidence in the adequacy of the conventional forces of the Alliance, above all the forces in place on the central front and those available for prompt reinforcement. It seems clear that the nations of the Alliance together can provide whatever forces are needed, and within realistic budgetary constraints, but it is a quite different question whether they can summon the necessary political will. Evidence from the history of the Alliance is mixed. There has been great progress in the conventional defenses of NATO in the 30 years since the 1952 Lisbon communiqué, but there have also been failures to meet force goals all along the way.

In each of the four nations which account for more than 90 percent of NATO's collective defense and a still higher proportion of its strength on the central front, there remain major unresolved political issues that critically affect contributions to conventional deterrence: for example, it can be asked what priority the United

Kingdom gives to the British Army of the Rhine, what level of NATO-connected deployment can be accepted by France, what degree of German relative strength is acceptable to the Allies and fair to the Federal Republic itself, and whether we Americans have a durable and effective answer to our military manpower needs in the present all-volunteer active and reserve forces. These are the kinds of questions—and there are many more—that would require review and resolution in the course of reaching any final decision to move to a responsible policy of no-first-use.

There should also be an examination of the ways in which the concept of early use of nuclear weapons may have been built into existing forces, tactics, and general military expectations. To the degree that this has happened, there could be a dangerous gap right now between real capabilities and those which political leaders might wish to have in a time of crisis. Conversely there should be careful study of what a policy of no-first-use would require in those same terms. It seems more than likely that once the military leaders of the Alliance have learned to think and act steadily on this "conventional" assumption, their forces will be better instruments for stability in crises and for general deterrence, as well as for the maintenance of the nuclear firebreak so vital to us all.

No one should underestimate either the difficulty or the importance of the shift in military attitudes implied by a no-first-use policy. Although military commanders are well aware of the terrible dangers in any exchange of nuclear weapons, it is a strong military tradition to maintain that aggressive war, not the use of any one weapon, is the central evil. Many officers will be initially unenthusiastic about any formal policy that puts limits on their recourse to a weapon of apparently decisive power. Yet the basic argument for a no-first-use policy can be stated in strictly military terms: that any other course involves unacceptable risks to the national life that military forces exist to defend. The military officers of the Alliance can be expected to understand the force of this proposition, even if many of them do not initially agree with it. Moreover, there is every reason for confidence that they will loyally accept any policy that has the support of their governments and the peoples behind them, just as they have fully accepted the present arrangements under which the use of nuclear weapons, even in retaliation for a nuclear attack, requires advance and specific approval by the head of government.

An Allied posture of no-first-use would have one special effect that can be set forth in advance: it would draw new attention to the importance of maintaining and improving the specifically American conventional forces in Europe. The principal political difficulty in a policy of no-first-use is that it may be taken in Europe, and especially in the Federal Republic, as evidence of a reduced American interest in the Alliance and in effective overall deterrence. The argument here is exactly the opposite: that such a policy is the best one available for keeping the Alliance united and effective. Nonetheless the psychological realities of the relation between the Federal Republic and the United States are such that the only way to prevent corrosive German suspicion of American intentions, under a no-first-use regime, will be for Americans to accept for themselves an appropriate share in any new level of conventional effort that the policy may require.

Yet it would be wrong to make any hasty judgment that those new levels of effort must be excessively high. The subject is complex, and the more so because both technology and politics are changing. Precision-guided munitions, in technology, and the visible weakening of the military solidity of the Warsaw Pact, in politics, are only two examples of changes working to the advantage of the Alliance. Moreover there has been some tendency, over many years, to exaggerate the relative conventional strength of the U.S.S.R. and to underestimate Soviet awareness of the enormous costs and risks of any form of aggression against NATO.

Today there is literally no one who really knows what would be needed. Most of the measures routinely used in both official and private analyses are static and fragmentary. An especially arbitrary, if obviously convenient, measure of progress is that of spending levels. But it is political will, not budgetary pressure, that will be decisive. The value of greater safety from both nuclear and conventional danger is so great that even if careful analysis showed that the necessary conventional posture would require funding larger than the three-percent real increase that has been the common target of recent years, it would be the best bargain ever offered to the members of the Alliance.

Yet there is no need for crash programs, which always bring extra costs. The direction of the Allied effort will be more important than its velocity. The final establishment of a firm policy of no-first-use, in any case, will obviously require time. What is important today is to begin to move in this direction.

V

The concept of renouncing any first use of nuclear weapons should also be tested by careful review of the value of existing

NATO plans for selective and limited use of nuclear weapons. While many scenarios for nuclear war-fighting are nonsensical, it must be recognized that cautious and sober senior officers have found it prudent to ask themselves what alternatives to defeat they could propose to their civilian superiors if a massive conventional Soviet attack seemed about to make a decisive breakthrough. This question has generated contingency plans for battlefield uses of small numbers of nuclear weapons which might prevent that particular disaster. It is hard to see how any such action could be taken without the most enormous risk of rapid and catastrophic escalation, but it is a fair challenge to a policy of no-first-use that it should be accompanied by a level of conventional strength that would make such plans unnecessary.

In the light of this difficulty it would be prudent to consider whether there is any acceptable policy short of no-first-use. One possible example is what might be called "no-*early*-first-use;" such a policy might leave open the option of some limited nuclear action to fend off a final large-scale conventional defeat, and by renunciation of any immediate first use and increased emphasis on conventional capabilities it might be thought to help somewhat in reducing current fears.

But the value of a clear and simple position would be great, especially in its effect on ourselves and our Allies. One trouble with exceptions is that they easily become rules. It seems much better that even the most responsible choice of even the most limited nuclear actions to prevent even the most imminent conventional disaster should be left out of authorized policy. What the Alliance needs most today is not the refinement of its nuclear options, but a clear-cut decision to avoid them as long as others do.

VI

Who should make the examination here proposed? The present American Administration has so far shown little interest in questions of this sort, and indeed a seeming callousness in some quarters in Washington toward nuclear dangers may be partly responsible for some of the recent unrest in Europe. But each of the four of us has served in Administrations which revised their early thoughts on nuclear weapons policy. James Byrnes learned the need to seek international control; John Foster Dulles stepped back somewhat from his early belief in massive retaliation; Dwight Eisenhower came to believe in the effort to ban nuclear tests which he at first thought dangerous; the Administration of John

F. Kennedy (in which we all served) modified its early views on targeting doctrine; Lyndon Johnson shelved the proposed MLF when he decided it was causing more trouble than it was worth; and Richard Nixon agreed to narrow limits on anti-ballistic missiles whose large-scale deployment he had once thought indispensable. There were changes also in the Ford and Carter Administrations, and President Reagan has already adjusted his views on the usefulness of early arms control negotiations, even though we remain in a time of general stress between Washington and Moscow. No Administration should be held, and none should hold itseif, to inflexible first positions on these extraordinarily difficult matters.

Nor does this question need to wait upon governments for study. The day is long past when public awe and governmental secrecy made nuclear policy a matter for only the most private executive determination. The questions presented by a policy of no-first-use must indeed be decided by governments, but they can and should be considered by citizens. In recent months strong private voices have been raised on both sides of the Atlantic on behalf of strengthened conventional forces. When this cause is argued by such men as Christoph Bertram, Field Marshal Lord Carver, Admiral Noel Gayler, Professor Michael Howard, Henry Kissinger, François de Rose, Theo Sommer, and General Maxwell Taylor, to name only a few, it is fair to conclude that at least in its general direction the present argument is not outside the mainstream of thinking within the Alliance. Indeed there is evidence of renewed concern for conventional forces in governments too.

What should be added, in both public and private sectors, is a fresh, sustained, and careful consideration of the requirements and the benefits of deciding that the policy of the Atlantic Alliance should be to keep its nuclear weapons unused as long as others do the same. Our own belief, though we do not here assert it as proven, is that when this possibility is fully explored it will be evident that the advantages of the policy far outweigh its costs, and that this demonstration will help the peoples and governments of the Alliance to find the political will to move in this direction. In this spirit we go on to sketch the benefits that could come from such a change.

VII

The first possible advantage of a policy of no-first-use is in the management of the nuclear deterrent forces that would still be necessary. Once we escape from the need to plan for a first use that is credible, we can escape also from many of the complex arguments that have led to assertions that all sorts of new nuclear capabilities are necessary to create or restore a capability for something called "escalation dominance"—a capability to fight and "win" a nuclear war at any level. What would be needed, under no-first-use, is a set of capabilities we already have in overflowing measure—capabilities for appropriate retaliation to any kind of Soviet nuclear attack which would leave the Soviet Union in no doubt that it too should adhere to a policy of no-first-use. The Soviet government is already aware of the awful risk inherent in any use of these weapons, and there is no current or prospective Soviet "superiority" that would tempt anyone in Moscow toward nuclear adventurism. (All four of us are wholly unpersuaded by the argument advanced in recent years that the Soviet Union could ever rationally expect to gain from such a wild effort as a massive first strike on land-based American strategic missiles.)

Once it is clear that the only nuclear need of the Alliance is for adequately survivable and varied *second strike* forces, requirements for the modernization of major nuclear systems will become more modest than has been assumed. In particular we can escape from the notion that we must somehow match everything the rocket commanders in the Soviet Union extract from their government. It seems doubtful, also, that under such a policy it would be necessary or desirable to deploy neutron bombs. The savings permitted by more modest programs could go toward meeting the financial costs of our contribution to conventional forces.

It is important to avoid misunderstanding here. In the conditions of the 1980s, and in the absence of agreement on both sides to proceed to very large-scale reductions in nuclear forces, it is clear that large, varied, and survivable nuclear forces will still be necessary for nuclear deterrence. The point is not that we Americans should move unilaterally to some "minimum" force of a few tens or even hundreds of missiles, but rather that once we escape from the pressure to seem willing and able to use these weapons first, we shall find that our requirements are much less massive than is now widely supposed.

A posture of no-first-use should also go far to meet the understandable anxieties that underlie much of the new interest in nuclear disarmament, both in Europe and in our own country. Some of the proposals generated by this new interest may lack practicability for the present. For example, proposals to make "all" of Europe—from Portugal to Poland—a nuclear-free zone do not seem to take full account of the reality that thousands of long-range weapons deep in the Soviet Union will still be able to target Western Europe. But a policy of no-first-use, with its accompaniment of a reduced requirement for new Allied nuclear systems, should allow a considerable reduction in fears of all sorts. Certainly such a new policy would neutralize the highly disruptive argument currently put about in Europe: that plans for theater nuclear modernization reflect an American hope to fight a nuclear war limited to Europe. Such modernization might or might not be needed under a policy of no-first-use; that question, given the size and versatility of other existing and prospective American forces, would be a matter primarily for European decision (as it is today).

An effective policy of no-first-use will also reduce the risk of conventional aggression in Europe. That risk has never been as great as prophets of doom have claimed and has always lain primarily in the possibility that Soviet leaders might think they could achieve some quick and limited gain that would be accepted because no defense or reply could be concerted. That temptation has been much reduced by the Allied conventional deployments achieved in the last 20 years, and it would be reduced still further by the additional shift in the balance of Allied effort that a no-first-use policy would both permit and require. The risk that an adventurist Soviet leader might take the terrible gamble of conventional aggression was greater in the past than it is today, and is greater today than it would be under no-first-use, backed up by an effective conventional defense.

VIII

We have been discussing a problem of military policy, but our interest is also political. The principal immediate danger in the current military posture of the Alliance is not that it will lead to large-scale war, conventional or nuclear. The balance of terror, and the caution of both sides, appear strong enough today to prevent such a catastrophe, at least in the absence of some deeply destabilizing political change which might lead to panic or adventurism on either side. But the present unbalanced reliance on nuclear weapons, if long continued, might produce exactly such political change. The events of the last year have shown that differing perceptions of the role of nuclear weapons can lead to destructive recriminations, and when these differences are compounded by understandable disagreements on other matters such as Poland and the Middle East, the possibilities for trouble among Allies are evident.

The political coherence of the Alliance, especially in times of stress, is at least as important as the military strength required to maintain credible deterrence. Indeed the political requirement has, if anything, an even higher priority. Soviet leaders would be most pleased to help the Alliance fall into total disarray, and would much prefer such a development to the inescapable uncertainties of open conflict. Conversely, if consensus is re-established on a military policy that the peoples and governments of the Alliance can believe in, both political will and deterrent credibility will be reinforced. Plenty of hard questions will remain, but both fear and mistrust will be reduced, and they are the most immediate enemies.

There remains one underlying reality which could not be removed by even the most explicit declaratory policy of no-first-use. Even if the nuclear powers of the Alliance should join, with the support of other Allies, in a policy of no-first-use, and even if that decision should lead to a common declaration of such policy by these powers and the Soviet Union, no one on either side could guarantee beyond all possible doubt that if conventional warfare broke out on a large scale there would in fact be no use of nuclear weapons. We could not make that assumption about the Soviet Union, and we must recognize that Soviet leaders could not make it about us. As long as the weapons themselves exist, the possibility of their use will remain.

But this inescapable reality does not undercut the value of a no-first-use policy. That value is first of all for the internal health of the Western Alliance itself. A posture of effective conventional balance and survivable second-strike nuclear strength is vastly better for our own peoples and governments, in a deep sense more civilized, than one that forces the serious contemplation of "limited" nuclear scenarios that are at once terrifying and implausible.

There is strong reason to believe that no-first-use can also help in our relations with the Soviet Union. The Soviet government has repeatedly offered to join the West in declaring such a policy, and while such declarations may have only limited reliability, it would be wrong to disregard the real value to both sides of a jointly declared adherence to this policy. To renounce the first use of nuclear weapons is to accept an enormous burden of responsibility for any later violation. The existence of such a clearly declared common pledge would increase the cost and risk of any sudden use of nuclear weapons by either side and correspondingly reduce the political force of spoken or unspoken threats of such use.

A posture and policy of no-first-use also could help to open the path toward serious reduction of nuclear armaments on both sides. The nuclear decades have shown how hard it is to get agreements that really do constrain these weapons, and no one can say with assurance that any one step can make a decisive difference. But just as a policy of no-first-use should reduce the pressures on our side for massive new nuclear forces, it should help to increase the international incentives for the Soviet Union to show some restraint of its own. It is important not to exaggerate here, and certainly Soviet policies on procurement are not merely delayed mirror-images of ours. Nonetheless there are connections between what is said and what is done even in the Soviet Union, and there are incentives for moderation, even there, that could be strengthened by a jointly declared policy of renouncing first use. At a minimum such a declaration would give both sides additional reason to seek for agreements that would prevent a vastly expensive and potentially destabilizing contest for some kind of strategic advantage in outer space.

Finally, and in sum, we think a policy of no-first-use, especially if shared with the Soviet Union, would bring new hope to everyone in every country whose life is shadowed by the hideous possibility of a third great twentieth-century conflict in Europe—conventional or nuclear. It seems timely and even urgent to begin the careful study of a policy that could help to sweep this threat clean off the board of international affairs.

IX

We recognize that we have only opened this large question, that we have exhausted no aspect of it, and that we may have omitted important elements. We know that NATO is much more than its four strongest military members; we know that a policy of no-first-use in the Alliance would at once raise questions about America's stance in Korea and indeed other parts of Asia. We have chosen deliberately to focus on the central front of our central alliance, believing that a right choice there can only help toward right choices elsewhere.

What we dare to hope for is the kind of new and widespread consideration of the policy we have outlined that helped us 15 years ago toward SALT I, 25 years ago toward the Limited Test Ban, and 35 years ago toward the Alliance itself. Such consideration can be made all the more earnest and hopeful by keeping in mind one simple and frequently neglected reality: there has been no first use of nuclear weapons since 1945, and no one in any country regrets that fact. The right way to maintain this record is to recognize that in the age of massive thermonuclear overkill it no longer makes sense—if it ever did—to hold these weapons for any other purpose than the prevention of their use.

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LETTER OF TRANSMITTAL

United States Senate,
Committee on Foreign Relations,
Washington, D.C., March 4, 1982.

The Honorable Charles H. Percy,
Chairman Committee on Foreign Relations,
U.S. Senate, Washington, D.C.

Dear Mr. Chairman: Through its thirty-three year history, the North Atlantic Treaty Organization has encountered and overcome numerous problems described as "crises," and it now seems apparent that the alliance has entered another such period of strain. In recent years, we and our West European allies have experienced particular difficulties in coordinating our approaches to East-West relations. Differences have arisen over the Western response to the Soviet invasion of Afghanistan, the fate of the SALT II Treaty, deployment of new nuclear weapons in Europe, the imposition of martial law in Poland, and the planned Siberian-European pipeline. Indeed, so serious have become the tensions and frustrations that some in Congress are questioning one of the key elements of American participation in NATO—the stationing of over 300,000 U.S. troops in Western Europe.

It has been a commonplace during NATO's history to suggest that differences among the allies could be resolved by more thorough consultations or by more effective American leadership. While both factors are obviously important, it is clear that consultations and firm declarations cannot mask fundamental differences. Ultimately, cohesion depends on whether common ground can be found on basic questions of policy.

In recent years, I believe, Americans have not always taken full account of all factors influencing European approaches to alliance issues. We have in fact, from time to time, based U.S. policies and pronouncements on highly inaccurate images of allied concerns. Conversely, our European allies have not always fully understood certain basic factors motivating Americans actions. Unfortunately, events have created exaggerated images in both European and American public opinion that could, if allowed to stand, seriously undermine the alliance.

In the conviction that a healthy alliance relationship remains vital to U.S. interests, I called upon the Congressional Research Service to analyze the sources of differing United States and European approaches to East-West relations and the implications for NATO's future. This analysis, by Stanley R. Sloan, Specialist in U.S. Alliance Relations, provides timely insights valuable to every Member of Congress concerned about the state of alliance relations. It approaches the issues in a balanced, non-partisan fashion and outlines the range of choices available to the United States. In the hope that this report will contribute to the current debate concerning the American commitment to NATO, I respectfully submit it for publication.

Sincerely,

Joseph R. Biden, Jr.,
Ranking Member,
Subcommittee on European Affairs.

ABSTRACT

The Atlantic Alliance is in a severe crisis which could lead to a reconsideration of fundamental commitments to the North Atlantic Treaty Organization on both sides of the Atlantic. A major source of the current crisis can be found in differing U.S. and European attitudes toward East-West relations. Many of these differences are profound and, in the short term, are not likely to be fundamentally altered. They can be accommodated within the framework of the alliance as have differences many times in the past. If a basis for accommodation among the allies is not found, the future of the alliance may be in question. The current alliance framework, which permits evolutionary developments but tends to discourage radical change, has the power of inertia behind it—with all its shortcomings, it has helped maintain East-West peace and internal Western stability. Some alternative American approaches to European security could produce savings for the United States or allow reallocation of limited resources to other defense requirements. Approaches such as withdrawal of U.S. forces from Europe could, however, produce costs for U.S. interests vis a vis the Soviet Union and could be destabilizing within Europe. The question for policy makers is whether the risks of alternative approaches are worth the potential benefits.

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SUMMARY AND CONCLUSIONS

The Atlantic Alliance is without question in the midst of the most severe crisis it has faced for many years. The beginning of the crisis can perhaps be traced back to events that occurred during the Carter Administration—indecision regarding deployment of enhanced radiation warheads in Europe, differing interpretations of how to respond to the Soviet invasion of Afghanistan, the failure of SALT II, and the evolution of American nuclear strategy toward more flexible options. The first year of the Reagan Administration has witnessed the deepening of the crisis with events and policies aggravating United States-European differences over nuclear issues, the role of arms control, and how to respond to the crisis in Poland. These issues, combined with the ever-present question of defense burden sharing in the Alliance, have led some Members of Congress to question the U.S. commitment to NATO.

To some extent, the Western crisis can be attributed to short term policy choices, leadership failures on both sides of the Atlantic, and other problems that are more or less variable over time. But the roots of the crisis are more profound.

A major source of the crisis can be found in differing U.S. and European attitudes toward East-West relations. Many of these differences are not new; they have been part of the dynamic of alliance relations since NATO was founded. In fact, part of the success of the Alliance over the years has been the ability of the allies to accommodate their differences over East-West relations within a political framework that permits coordinated action. That framework, the essence of which is captured by a combination of "defense and détente" policies, now has fallen into disrepair.

The question is whether, under today's conditions, the alliance will be able to accommodate U.S. and European differences in a way that rehabilitates NATO's role as the coordinating mechanism for Western security policies. The answer will depend in part on how well the United States and the allies understand the factors that lead to policy and perceptual differences. Any new consensus which fails to acknowledge that there are fundamental differences will be doomed to obsolescence before it is incorporated in NATO communiques or blessed by summit declarations.

Geography.—Perhaps some most basic differences can be traced to the fact that "we are here and they are there." Most Americans presume that the minimal physical distance between European countries and the Soviet Union should lead to greater European concern about the "threat." The fact is that Western Europe's proximity to Soviet power makes Europeans particularly concerned about the consequences of war, and therefore particularly determined to avoid them. For

Americans, the European "theater" can be separated, at least intellectually, from their homeland; for Europeans, the homeland is the potential battlefield.

History.—The influence of geography is reinforced by differing historical experiences. Europeans have hosted two devastating wars in the last 65 years, and are therefore preoccupied by the desire to avoid war. Americans also want to avoid war. But no major hostilities have been fought on American soil since our Civil War and we see our involvement in World War I and II as having been required by European inability to deal effectively with threats to peace. We tend to see the current European attitude as weak-kneed; Europeans see our attitude as careless.

History may also help explain why there is a greater willingness in Europe to choose the "red" side of the simplistic "red or dead" dichotomy. Occupation or subjugation by domestic authoritarian regimes is not part of the American experience—most Americans find the prospect particularly horrendous. Most continental European countries have been occupied by foreign powers or subjugated by domestic authoritarian regimes. Europe's current political freedom and relative economic well-being tells Europeans that a condition of occupation or subjugation is not necessarily permanent; that resistance and recovery are possible, while death is quite permanent.

Ideology.—In spite of a wide area of shared ideological commitments, recognized in the North Atlantic Treaty, there are fundamental differences between the European and American ideological experiences. The Marxist critique of capitalism has deep roots in Europe. All European countries have social programs more extensive than those in the United States. Many Europeans regard the ideals of Marxism as a source of inspiration even if they reject the systems that have been spawned by the Soviet revolution.

To Americans, the Soviet Union embodies the primary external ideological challenge to the American system. Because the threat is most unambiguously an external one, the confrontation between the two systems is generally seen as occurring in other countries, in Europe and in the third world. The perspective from Europe is somewhat different. Germany, in particular, on the front Western lines toward the East, regards the success of its social and economic system as a vital component of German security policy. Therefore, tradeoffs between defense spending and social programs pose far more difficult choices for Germany than for the United States.

And, there is a West-West ideological dimension. In the early days of the NATO alliance, the United States was regarded by many Europeans as a model political system. Now, many West Europeans perceive their system of society and government as superior or at least equal to that of the United States. A certain degree of greater self confidence inevitably leads Europeans to think that policies based on their assessment of national and Western interests are at least as valid as those recommended by the United States.

Demography may also be working slowly against U.S.-European understanding on security policy requirements. Immigration trends have reduced in relative terms the European contribution to the American melting pot and increased the Latin American and Asian contribution. These trends are already being used by some observers to argue that American interests and commitments should be redirected away from Europe.

Differing global roles and military capabilities also produce U.S.-European disagreements on East-West relations. The decline since the Second World War in Europe's ability to affect developments in Third World nations was accompanied by an evolving strategic approach to instability in Third World. European policies came increasingly to depend on political and economic instruments to influence events in the Third World.

The Europeans reject what they see as an occasional American tendency to concentrate too narrowly on military responses to potential or actual Soviet challenges. They are at least equally—if not more—interested in developing economic ties and political bonds that will both ensure cooperative relations with third world nations and discourage Soviet adventurism.

Fruits of détente.—Europe has gained far more in tangible benefits, some of utmost importance, than has the United States from the period of détente. This fact makes Europeans more inclined to regard détente as "divisible," to protect the gains of détente in Europe. The United States, carrying the majority of Western global military burdens, has a much greater interest in treating détente as "indivisible," with Soviet actions outside of Europe seen as providing cause for Western response within the European framework.

Economics.—It is a popular American belief that European attitudes toward East-West relations are driven to a significant degree by avarice—greed for the fruits of expanded trade with the East. It is a popular European retort that American practice does not match its rhetoric when real American economic interests are called into question.

On balance, Europe does have more to lose than does the United States in terms of content from disruption of trade with the East. The United States is not heavily dependent on trade with the East, nor does it count on growth in that trade as a vital component of its economic growth. West European trade with the East involves mutual dependencies, and whether the ultimate balance favors East or West is a matter for debate. To many Europeans, the risks are worth taking. The cost/benefit relationship does not look nearly as favorable from an American perspective.

Specific national perspectives.—West Germany's approach to East-West relations is very much a product of the division of the German nation, the vulnerability of Berlin, and the legal and psychological limits on Germany's military capabilities. A policy of strict confrontation with the East would entail far higher human and financial costs for West Germany than for the United States. France sees for itself a special role as the leader of Western Europe in relations with the East. French governments since de Gaulle have protected carefully France's freedom of movement in policies toward the East. But France also has acted as a European "balancer," demonstrating independence of the United States when Germany seemed dominated by American policy and power and, now, increasing its criticism of the Soviet Union to balance Germany's more independent role between the two superpowers.

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The recent differences between the United States and the European allies over sanctions against the Soviet Union and Poland illustrate a number of the profound differences between American and European perspectives. Geography makes Europeans far more concerned than Americans about the possibility that instability in Poland could turn into a continental military confrontation. The Europeans may therefore place a higher value on internal stability in Poland. History reinforces this concern, and also inclines West Europeans to believe that the Polish "renewal" has a chance of resuming so long as there is no direct Soviet intervention.

Furthermore, differing economic stakes create different perspectives on sanctions against the Soviet Union. West European nations have much to lose and very little to gain from, for example, aborting the gas pipeline deal with the Soviet Union or declaring Poland in default. Given Europe's current economic recession, which many Europeans perceive as due in part to high U.S. interest rates, the gas pipeline deal means jobs now as well as energy later. Furthermore, while declaring Poland in default would constitute a strong signal against martial law, it would be West European, not American, banks which would suffer the consequences.

The recent prominence of nuclear issues in United States-European relations has also illustrated sources of divergent perceptions. Differing geographical locations and historical experiences produced different attitudes toward the prospect of nuclear war in Europe. More benign West European perspectives on the Soviet Union (seeing Moscow as motivated primarily by fear for its security rather than by dreams of conquest) also have led many Europeans to interpret differently recent improvements in Soviet theater nuclear force capabilities.

In the West European democracies as well as in the United States, foreign and defense policies are formulated with at least some regard to public opinion. Policy makers and legislators should therefore have available accurate information on public attitudes within the alliance.

American headlines have given the impression that neutralism, pacificism, and anti-Americanism are spreading across the continent. This impression is not confirmed by public opinion polls. Large majorities of Europeans "like" Americans. They want a strong but not belligerent America; they welcome strong U.S. leadership in the world. They remain, for the most part, committed to NATO. At the same time, they do not believe that dramatic increases in their defense spending would lessen the threat they face. And, they look for evidence that the United States is making a genuine attempt to reduce tensions and negotiate arms control agreements.

The currently-popular European image of Americans as bent on confrontation with the Soviet Union is also inaccurate. There *is* strong support in the United States for efforts to rebuild American military capabilities. Many Americans would feel more comfortable if the United States were superior to the Soviet Union. But most Americans would be willing to live with a condition of overall military parity. Large majorities of Americans want the United States to try to negotiate arms control agreements with the Soviet Union. Americans would support the use of military force when vital American interests are threatened, but there is a strong residue of opposition to any military involvement that even vaguely resembles the start of another Vietnam.

How serious is the current crisis? A number of analysts argue that NATO has outlived its usefulness; some contend that its strategy is outdated and irrelevant. But others argue that we are talking ourselves into a bigger crisis than is justified by events; NATO, for these analysts, still represents the best framework possible for preserving East-West peace and internal West European stability.

In any case, it appears that American objectives and policies in Europe will increasingly come under close scrutiny. This examination presumably will take place with reference to various concepts of the future of American involvement in European security arrangements.

No matter what policy objectives the United States selects, it seems unlikely that the alliance will move either toward a reassertion of American preponderance or, on the other extreme, fragmentation of Western Europe and subordination to the Soviet Union. The more likely range of possibilities lies somewhere in between.

Continuity with traditional American approaches to the alliance does not promise an early end to the expensive U.S. troop presence in Europe or an end to the frustrating process of coordinating policies with recalcitrant allies. Furthermore, the United States and Europe will likely continue to have different economic stakes in relations with the East, and therefore divergent attitudes toward the use of economic ties as weapons in East-West competition. Continuity does, however, narrow the range of uncertainty about the future and perhaps contains fewer risks than other alternative futures. Congress can support this approach to the alliance by continuing to support an active U.S. participation in European security arrangements and a substantial U.S. commitment to NATO which constitutes our entree to the European security game.

If one concludes that the alliance is not vital to American interests, an evolutionary approach may fail adequately to protect U.S. interests in the future. The Congress, through its ability to affect U.S. force levels and commitments, could mandate either a gradual or rapid withdrawal of U.S. forces from Europe. Such a move could permit the United States to save some money (if the withdrawn troops are disbanded) or reallocate defense resources to other commitments. It would be consistent with this approach to put aside any concern about European economic interests and, for example, to attempt unilaterally to block the gas pipeline deal with the Soviet Union or to declare Poland in default of its international financial obligations.

Such a break with traditional American approaches to the alliance promises more uncertainties than does an evolutionary approach. The Congress presumably would mandate such an approach only if it had decided, as some have argued, (1) that it makes little difference to U.S. interests whether or not Western Europe falls increasingly under Soviet influence; or (2) that the shock of a U.S. withdrawal would force the Europeans to organize a unified nuclear and conventional defense of Europe, allied to the United States.

The formation of a "United Europe" would, in theory, relieve the United States of some difficult burdens. U.S. policy since World

War II has encouraged European integration without trying to force the pace of the process. Would "shock treatment" finally convince the Europeans to overcome all the traditional obstacles to greater unity? How can the shock treatment be applied without guaranteeing European unity on terms that are potentially unfavorable to U.S. interests? Even if the Europeans decided that, in principle, they wanted to organize an independent defense in alliance with the United States, could they do it?

How great is the risk that the European nations, left more-or-less to organize their own defense, would be driven apart and into the arms of the Soviet Union? Are the benefits of disengagement from European defense worth the potential risks?

There are no certain answers to any of these questions. The answers ultimately lie in the realm of subjective judgment, and each analyst, official, Senator, and Representative must ultimately make his or her own best bet.

INTRODUCTION

In 1981, the Atlantic Alliance was thrown into disarray by a number of issues, many of which have their roots in differing approaches to East-West relations. What is the appropriate role of nuclear weapons in Alliance strategy? Is the United States planning on fighting a "limited nuclear war in Europe? In what ways can arms control enhance Western security, and what are the acceptable guidelines for arms control agreements? Have previous arms control initiatives failed to reduce the threat of war while undermining Western strength? Do the hundreds of thousands of protestors in European cities signal a new era of anti-American, neutralist sentiment in which American military forces will not only be unappreciated in Europe but also unwanted? How should the West respond to repression of reform in Poland? What are the dangers of growing West European dependence on Soviet energy sources, particularly natural gas? Can American officials continue to justify to a skeptical American electorate the costly American commitment to European defense?

In 1982, it is possible that the crisis in the alliance which was aggravated by these and other issues will inspire legislative attempts to readjust, or perhaps radically alter, the U.S. role in the NATO alliance. A reexamination by the U.S. Congress of the U.S. commitment to European defense would undoubtedly be contentious, and would inevitably produce additional tension within the alliance. Such a debate would, at present, be set against widespread American misunderstanding or misinterpretation of European attitudes toward East-West relations; it would be matched by an equally inadequate European understanding of American perceptions.

This report attempts to identify the *sources* of United States and European attitudes toward East-West relations. The premise of this analysis is that these sources of differing perceptions are profound, and to some extent immutable. Many of these differences have prevailed since the alliance was founded and the allies clearly have managed to accommodate them over the years. Other differences are new, the product of shifting power balances, changing economic circumstances, and generational successions on both sides of the Atlantic. Taken together, these factors have created a crisis of confidence in the ability of the alliance to meet the security requirements of the NATO members in the 1980's.

After identifying some of these sources of differing approaches to East-West relations, the report looks at these perceptual differences in terms of public opinion, discussing what appear to be some current American and European misconceptions about each other.[1]

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[1] Generalizations about "European" and "American" points of view never do full justice to reality. In this report, such generalizations are intended to capture the predominant perspectives of either side of the Atlantic. Important exceptions to generalizations are noted.

Finally, the report suggests some alternative implications for the Alliance of the current trends in attitudes toward East-West relations, alternative futures for the alliance, and options for the Congress. The question is whether, under today's conditions, the Alliance will be able to accommodate United States and European differences in a way that rehabilitates NATO's role as the coordinating mechanism for Western defense and for Western cooperation with the Soviet Union and its East European allies.

SOURCES OF DIFFERING ATTITUDES

There is an air of crisis across the Atlantic. We accuse the Europeans of harboring anti-American thoughts and of risking "self-Finlandization." Europeans assert that the United States has turned into an irrational ally with a fascination for military power whose follies could drag Europe into an unnecessary and devastating war. The specific issues that have provided the opportunities for these mutual recriminations include the uneven Western response to the Soviet invasion of Afghanistan, the Iranian hostage situation, NATO's decision to deploy new long-range theater nuclear weapons, the failure of the SALT II Treaty, and the Polish crisis.

There has been a tendency, in attempting to explain these differences, to treat them as aberrations, the product of inconsistent policies, leadership failures, or a result of insufficient will and determination. But while such factors undoubtedly have been signposts along the road into the current crisis, the roots go much deeper.

As an international group of experts observed early in 1981, "It would be dangerously erroneous in particular to believe that once the international situation quiets down, the difficulties between Europe and America will simply disappear. They find their roots in deeper, historical and structural trends."[2] Any new "consensus" which fails to acknowledge that there are fundamental differences between American and European outlooks on East-West relations will be doomed to obsolescence before it is incorporated in NATO communiques or blessed by summit declarations.

What follows is an examination of some of the fundamental sources of United States and European differences over East-West relations. This brief discussion is followed by an analysis of how these sources have been reflected in public opinion surveys and how they have influenced recent issues which have divided the allies.

GEOGRAPHY: WE ARE HERE, AND THEY ARE THERE

Perhaps the most basic differences between European and American approaches to East-West relations can be traced, at least in part, to the fact that the Atlantic Ocean and many miles separate the United States from Europe, while Western Europe occupies the same land mass as the Soviet Union and its Warsaw Pact allies. It is less than 1,000 air miles from Moscow to Berlin, about the same distance between Washington and New Orleans. It is approximately the same distance from Moscow to Paris or London as it is from New York to Denver. But Washington is almost 5,000 miles from Moscow.

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[2] Kaiser, Karl: Lord, Winston: de Montbrial, Thierry; and Watt, David. Western Security: What has changed? What should be done? Council on Foreign Relations, Inc. (New York) 1981, p. 11.

Many Americans ask why Europeans, much closer to the Soviet Union, appear far less concerned about the "Soviet threat." The shorthand answer, "We are here and they are there," identifies the puzzle but does not resolve it. Proximity to Soviet military power should lead to greater concern, according to the logic of the American question. But it clearly does not, suggesting that even in this day of instantaneous communications and space travel, the Atlantic Ocean divides us more than it unites us.

The fact is that Western Europe's proximity to Soviet power makes Europeans particularly concerned about the consequences of war, and therefore particularly determined to avoid them. For Americans, the European "theater" can be separated, at least intellectually, from their homeland; for Europeans, the homeland is the potential battlefield. As a result, we have traditionally placed different emphases on deterrence versus war-fighting capabilities, on conventional versus nuclear weapons, and on arms control versus defense improvements.

These geographically-based differences asserted themselves strongly in 1981. One of the principal themes of the anti-nuclear movement in Europe was that the United States was moving toward a nuclear war-fighting posture in Europe, and that the installation of new long-range theater nuclear weapons was evidence of that tendency. This charge was set against the enunciation by the Carter administration of a more flexible nuclear employment strategy (PD-59) in 1980 and the decision of the Reagan administration to construct (but not deploy) enhanced radiation warheads—the "neutron bomb." The final proof for many Europeans of American willingness to contemplate "limited" nuclear war in Europe came on October 16 when President Reagan remarked that he "could see where you could have the exchange of tactical weapons against troops in the field without it bringing either one of the major powers to pushing the button."

In fact, the President's remark was intellectually logical and consistent with accepted NATO policy. The problem is that no policy can resolve the simple fact created by geography. Alliance unity depends on a "one-for-all and all-for-one" philosophy, and alliance cohesion has been maintained on this basis in the form of a policy of deterrence. Deterrence aims to prevent events ever coming to the point where geographic reality would assert itself. But deterrence rests on a necessarily-ambiguous foundation, and the margin for uncertainty has increased in parallel with the growth in the Soviet Union's military capabilities.

Geography also creates political and psychological barriers between the United States and the European allies. Europeans have both national and regional identities. For Americans, the national and regional identity is one in the same. The East-West demarcation in Europe, imposed by the outcome of World War II and preserved by the installation of authoritarian regimes in Eastern Europe, cuts across the regional identity without removing it from either East or West European nations. Because the United States does not, and probably cannot, fully share this identification, we place different values on some of the fruits of détente, for example, increases in human contacts.

At the same time, the Soviet Union is able to assert its place as a European nation; which, at least from the geographical perspective, is a point in common with Western Europe. When geography is married with history, the "European" identity as opposed to the "American" identity takes on special meaning. As one observer has noted, "Nobody in Europe, West or East, imagines that war means only fighting overseas. For all Europeans, the question of war is the question of survival, not just of superiority." [3]

But geography is a complex factor. What explains the fact that the Canadians, in the same relative geographic position as the United States, display some very "European" traits when it comes to defense efforts and arms control? With regard to defense spending, the Canadians do not even do as well as some of the European countries that are popularly reputed to be most infected by détente. In the Canadian case, the reason (or excuse) for not doing more may be the geographic proximity to the American defense guarantee. In other words, Canada relies on the fact that the United States must regard Canada's defense as vital to its own security.

HISTORY HAS TAUGHT US DIFFERENT LESSONS

It is an objective fact that the United States and Europe have passed through dramatically different historical experiences and naturally have drawn somewhat different lessons from those experiences.

Europeans have hosted two devastating wars in the last 65 years. Most continental European countries, at one time or another in this century, have been defeated and occupied by foreign forces. From a European perspective, the desire to avoid war remains an immediate and meaningful imperative.

Americans also want to avoid war. But no major hostilities have been fought on American soil since our Civil War, 120 years ago. The United States emerged from both world wars "victorious," suffering neither occupation nor the ravages of war on its territory. The most popular American historical perspective on the First and Second World Wars is that the United States was forced to join the hostilities because Europe had not been able to deal with the threat to peace. In other words, appeasement of the antagonistic power is regarded as the greatest danger for the West.

Fritz Stern, an American historian, has described the effects of these differing experiences with war in the following terms:

> . . . the Europeans cherish a different historic memory from ours. To Europeans the increase in overkill capacity is an irrational act, an absurdity: they know that we have enough to kill and be killed a hundred times over again. *Their* historic experience in this century—unlike America's until Vietnam—has not been the triumphant use of power but the experience of brute and futile power, blindly spent and blindly worshipped. Even an unhistorical generation in Europe remembers World War I as the epitome of the mindless worship of force; they remember the guardians of morality sanctifying violence. For the Europeans, this century has been the experience of the absurd, first as an intuition of artists, then as drama produced by history. Having lost their preeminence in repeated wars, the Europeans today seek alternatives to force.[4]

Many Americans would say that European nations, in seeking alternatives to the use of force, have opted out of responsibility to their citizens as well as to their alliances. The European starting point in East-West relations appears to be the possible, rather than the desirable. History, on the other hand, has left us with an expectation of unlimited possibilities—a theme that undoubtedly helped Ronald Reagan capture of the White House from Jimmy Carter who, in the eyes of many Americans, came to symbolize limits on the possible.

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[3] Lewis, Flora. "How Europe Thinks of War," The New York Times, June 8, 1981, p. A15.
[4] Stern, Fritz. "A Shift of Mood in Europe." *The New York Times*, September 2, 1981, p. A27.

The United States emerged from the Second World War wearing a "white hat." We had come to the rescue of democracy and freedom and had provided the additional force needed to defeat fascism. After the war, we saw ourselves as the main barrier to the spread of communism. Our involvement in Vietnam called into question our moral posture. Many Americans, as well as friends overseas, questioned whether the United States had become the aggressor in its Southeast Asian anti-Communist undertaking. But now we, as a nation, apparently have reassessed our guilt feelings derived from the Vietnam experience and have concluded that we went too far in abjuring our world role.

An even longer-term factor reinforces the American tendency to seek the desirable rather than to work within limits. This country matured with one frontier after another to cross and with a record of sustained accomplishment and growth. We had for the first one hundred and sixty years of our nationhood seemingly unlimited resources to call on to support our national objectives. Now we have entered an era in which at least some resources are seen as truly limited. But the American psychology still inclines us to reach beyond our grasp and to regard limits as new frontiers to be crossed rather than as boundaries to be observed. Thus, in our competition with the Soviet Union, we are inclined to push beyond limits that our West European allies find more judicious to accept.

Our scorn of the ways of the "old world" is also well-engrained in our national history. As Louis J. Halle has reminded us,

> We have to recall that the American nation had its beginnings in the seventeenth century, as a nation of refugees from the tyrannies, the persecutions, and the power-politics of the Old World: . . .
>
> In our American mythology, the refugees and their children had established in their God-given land a new and entirely different kind of society in which all men were free and equal, in which all men were brothers, in which the wicked devices of the Old World . . . were happily unknown. . . .
>
> Not only had God given us a virgin continent, replete with all goods, on which to establish our society, he had given us the great oceans to protect it. Part of our American mythology, then, was that we were beyond the reach of the wicked.[5]

Europeans, including Russians, were, of course, never beyond the "reach of the wicked." And, in another marriage of geography and history, West Europeans generally view Russian behavior as conditioned by the numerous times that marauding armies have marched across Russia's naturally-exposed frontiers. Americans tend to see the Soviet Union as an expansionist power attempting to spread communism across the world. Europeans, on the other hand, tend to see Russia in an historical context as driven by fear and insecurity. This does not necessarily make the Soviet Union less dangerous in West European eyes. But it does make West European governments, and particularly

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[5] Halle, Louis J. The Cold War as History. Harper and Row, Publishers (New York), 1967, pp. 12–13.

West Germany, reluctant to take steps that will reinforce Russian inclinations to substitute military strength for political legitimacy and economic performance.

Debates between Americans and Europeans over East-West relations inevitably draw on historical analogies. As with most historical analogies, those used in this debate can be turned to favor either side of the argument. Stanley Hoffmann has called this the "game of historical analogies." [6] As Hoffmann points out, both Europeans and Americans hark back to the beginning of the First World War to prove the validity of their current approaches to the Soviet Union. Americans compare Soviet Russia and Imperial Germany while Europeans compare the competing alliances of today with those of 1914. Hoffmann describes the scenario:

> To the Europeans, Washington's view of 1914 suggests that war is the only way to curb Moscow, just as it was the only way to cut down German expansionism. To the Americans, the Europeans' view of 1914 means that—as in the Thirties—they are in effect willing to appease Moscow's expansionism. . . . To the Americans, if the Europeans failed to react strongly to as clearcut an aggression as the recent one [Afghanistan], what are the chances of their standing up in cases that may well be more ambiguous. . . . To the Europeans, if Americans overreact in this instance, aren't they going to push the Soviets onto a collision course that could still be averted by a wider policy?

One measure commonly applied to analysis of differing United States and European attitudes toward East-West relations has been the (false) dichotomy between "red or dead." However limited this image might be for explaining attitudes toward the Soviet Union, the fact is that there is a greater inclination in Europe to accept the "red" branch of the dichotomy than there is in the United States. It may well be that differing historical experiences (as well as varying ideological heritages) help explain the contract.[7]

Most European countries have, at one time or another, been occupied by foreign powers or subjugated by domestic authoritarian regimes. Their current political freedom and relative economic well-being tells Europeans that a condition of occupation or subjugation is not necessarily permanent; that resistance and recovery are possible. Death is quite permanent.

Americans have experienced neither authoritarian subjugation nor foreign occupation, and find the prospect essentially unthinkable. This contrast in historical experiences undoubtedly does not explain completely the differing attitudes; but neither do the verbal missiles exchanged across the Atlantic about fidelity to the common goals of the Alliance.

Finally, one exception must be taken to this generalized discussion of historical sources of differences between United States and European perceptions. The exception is England. The United Kingdom's experience in the two world wars of this century has created a perspective distinct from, but perhaps in fact a blend of, the American and the continental European attitudes. The British share to some degree the continental anxiety about war—Britain suffered heavily from manpower losses in World War I and from bombardment in World War

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[6] Hoffmann, Stanley. "The Crisis in the West", New York Review of Books, July 17, 1980, p. 44.

[7] See discussion of public opinion on the "red or dead" dichotomy on p. 26.

II. But the United Kingdom, like the United States, emerged from both wars victorious, never having been occupied. The British attitude therefore reflects a combination of "American" and "European" orientations.

IDEOLOGY: A MIXED HERITAGE

Americans and Europeans are united in their desire to protect individual rights, to defend their democratic political systems, and to sustain equitable and strong social and economic systems. Common ideological objectives are in fact explicitly expressed in the NATO Treaty. The Parties pledge in the preamble "to safeguard the freedom, common heritage and civilization of their peoples, founded on the principles of democracy, individual liberty and the rule of law." Further, in Article 2, they pledge to strengthen their "free institutions, by bringing about a better understanding of the principles upon which these institutions are founded . . . " and to "seek to eliminate conflict in their international economic policies" and "encourage economic collaboration between any or all of them."

But, in spite of a wide area of shared ideological commitments, there are fundamental differences between the European and American ideological experiences—differences which directly affect perceptions of the Soviet Union and which lead to conflicting American and European policy preferences.

The Marxist critique of capitalism has deep historical and political roots in Europe. A number of European countries have large Communist parties. Many Europeans regard Marxist ideals as a source of inspiration, even if they reject the systems that have been spawned by the Russian revolution. All European countries have important Socialist or Social Democratic parties, all of which support intervention of the government in the social and economic realm to allocate more equitably the costs and benefits of life within the country. In the major European allies, such programs are so thoroughly a part of the fabric of society that even conservative parties in government are unable to contemplate the type of cuts in social programs that the Reagan Administration is currently implementing in the United States.

The Marxist critique of capitalism has virtually no roots in the United States. The Democratic Party could by no stretch of the imagination be described as having a socialist program by European standards. The very term "socialism" still attracts a visceral negative reaction in the United States. Even though the United States has over the years developed extensive social programs, they were adopted and developed within a pragmatic rather than an ideological framework. And, the first year of the Reagan Administration has suggested that, without a firm basis in national ideology, costly social programs are particularly vulnerable at a time of intensified fiscal and economic pressure.

The question is to what extent the differing ideological experiences affect approaches to East-West relations. While the effect is in no way quantifiable, it seems clear that the Soviet Union and its system are regarded as more threatening by Americans than by many Europeans in part because of our differing ideological prisms. To Americans, the Soviet Union embodies the primary external ideological challenge to the American system. Because the threat is predominantly an external one, the confrontation between the two systems is generally seen as occurring in other countries, in Europe and in the Third World. U.S. information programs explicitly recognize the importance of the internal balance sheet of the American system for our foreign and defense posture. But the measure of our success in the competition usually is the acceptance by other countries of Communist or Western Democratic/capitalist systems of government and economy.

The perspective from Europe is somewhat different. The ideology that motivates the Soviet system is unacceptable to the vast majority of West Europeans—even many West European Communists. But because many West European countries, and West Germany in particular, are on the front line of the ideological competition with the Communist nations, they regard the effectiveness of their social and economic systems as a principal weapon in that ideological competition. Germany's Ambassador to NATO, Hans Georg Wieck, addressing an international conference on East-West relations in May 1981, reminded his listeners that the political threat to the West involves all elements of society, and that Western nations need cohesive answers to social and economic problems as well as to military challenges.[8] He reiterated German Defense Minister Hans Apel's comment that ideas move freely between tanks, from East to West as well as from West to East. With an East German neighbor sustaining a strong economic performance, West Germany cannot be insensitive to the economic and social aspects of the East-West competition. Social and economic health are regarded by Germany's leaders as an integral part of the country's security posture. Therefore, tradeoffs between defense spending and social programs pose more difficult choices for Germany than for most other countries.

Finally, there is a West-West as well as an East-West ideological dimension. European perceptions of the American system vitally affect the willingness of European governments to follow American prescriptions for East-West relations.

The United States was at one time held up as a model of Western society and government by many West Europeans. Now, many West Europeans perceive their system of society and government as superior to that of the United States. As one commentator has observed, "American political and social institutions fascinated Europeans in the 1940's and 1950's, because they seemed innovative and successful, while European institutions had failed. This is no longer so." [9]

The Vietnam war, and to a lesser extent, Watergate scandals, undoubtedly contributed to this change in perceptions, undermining American moral authority in European eyes. America's economic difficulties and decline in relative military power also contributed to this change.

Europe still has its own problems, problems which have become more severe in the economic recession of recent months. But it is notable that a victorious Socialist party in France has had sufficient confidence in its own ideological answers for French society to include Communist ministers in the government, initiate far-reaching social reforms, and at the same time join the United States in harsh criticism of Soviet behavior. Previous French governments have been afflicted by excessive paranoia about American domination, and have been driven to acts designed to "prove" French independence. This French Government appears to have taken French independence as a starting point for, rather than as an objective of, policy.

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[8] Wieck, Hans Georg. "Western Security and East-West Relations," speech presented to conference entitled "Toward a New East-West Balance," Knokke-Zoute, Belgium, May 9, 1981.

[9] Pfaff, William. "Reflections, Finlandization," *The New Yorker*, September 1, 1980, p. 34.

Similarly, the recent inclination of the West Germans to establish an independent bilateral dialogue with the Soviet Union undoubtedly grows out of a somewhat greater confidence in Germany's ability to define and pursue its national objectives. It may be excessive to describe the new German approach as Germanic Gaullism, but the German-Soviet agreement to consult regularly on the progress of United States-Soviet arms control negotiations is certainly an assertion of national prerogatives.

Perhaps the signs from both Bonn and Paris support the contention of William Pfaff, an American journalist, that "Europe is not weak, and is not fated to dependence on either of the superpowers." [10] But what we are discussing here is evolution and not revolution. The apparently increasing European confidence in home-grown ideologies and institutions is some distance from making Europe co-equal with the superpowers or independent of the vital American contribution to European security. For most Europeans, the diminished faith in American ideological leadership stops far short of rejection of alliance and cooperation with the United States.

DEMOGRAPHY: A CHANGING AMERICAN PROFILE

The United States was settled and populated for the most of its history by Europeans. This country has long acknowledged and cherished its cultural links to and common heritage with Europe, particularly to England but to the continental nations as well. We tried throughout most of the 19th century and into the 20th century to remain distant from European intrigues and power balances. But two world wars in this century raised questions about whether American interests could be protected through an isolationist approach. The foreign and defense policies of the United States have been "Eurocentric" since World War II not only because Europe was the fulcrum of the world power balance but also because our leaders have generally perceived a wide area of shared interests with West European democracies as well as a need to preserve peace and stability in Europe.

The demographic links between the United States and Europe remain strong. But current trends are slowly but surely working against traditional patterns. Immigration trends have reduced in relative terms the European contribution to the American melting pot and increased the Latin American and Asian contribution. While it is impossible to draw scientific linkages between this trend and American policy interests, it seems likely that, over time, these trends could influence the American concept of its interests in Europe.

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[10] Pfaff, op. cit., p. 31.

Already there are signs of change. As Pfaff has written, "Today, we are far more conscious of our non-European sources and our non-European quality; less homogeneous in our national culture; more preoccupied with our own national life." [11] Furthermore, the current mood in the United States leads some analysts to translate these trends into policy recommendations. A commentary in the Wall Street Journal, recommending that the United States withdraw from NATO, questions whether Europe and the United States are "inextricably" linked by history and culture. It goes on to argue that the United States should reorient its political, and military interests toward the Pacific:

> The vast Pacific Basin lies at America's other shore. It too has many cultures that are influencing America. The United States is absorbing a great immigration. Few of these immigrants are any longer from Europe. The vast bulk are from Mexico, Central America, East and Southeast Asia, not Europe.[12]

Such thinking could be a temporary aberration, a product of the current frictions between the United States and Europe; or, it could be a sign of things to come. In any case, the underlying fact cannot be denied: the United States is acquiring more diverse demographic roots.

Finally, there is also an interesting marriage between demographic factors and geography that already produces differing American and European approaches to East-West relations. For those in Western Europe who have relatives or friends in Eastern Europe the prospect of better access to those countries is very attractive. Most Europeans are close enough to Eastern Europe to be able to take advantage of liberalized access to the East European countries. For a West German, the opportunity to visit an aunt, uncle, cousin or grandparent in East Germany is a real gain in the quality of life.

Those in the United States with ethnic ties to East European nationals benefit less from liberalized access because of the greater distance and cost involved in taking advantage of this opportunity. It is no wonder, therefore, that improved access to Eastern Europe, which was one of the major accomplishments of détente in the 1970's, is appreciated far more in Europe than in the United States.

GLOBAL VERSUS REGIONAL ROLES AND CAPABILITIES

It is a simple fact that the United States is a global power with global military capabilities while the European nations are, with the exception of France and to a lesser extent Great Britain, regional powers with military capabilities limited to Europe. It was not always so, and the reversal of world roles has had much to do with disagreements between the United States and Europe concerning how best to deal with the Soviet challenge in the Third World.

Slowly but surely following World War II, European nations retreated from extensive Third World military involvement. The international consensus favoring the process of decolonization was the prime political factor behind Europe's withdrawal; the economic impetus was provided by Europe's need to reconstruct its devastated industrial capacity and its desire to concentrate resources on economic recovery and the process of regional economic integration. France retained a military intervention capability in Africa and an impressive naval presence in the Indian Ocean. But, for the most part, Europe's ability to influence global events with military forces became quite limited. The United States attempted to fill vacuums left by the European withdrawal.[13]

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[11] Pfaff, op. cit., p. 34.

[12] Nairn, Ronald C. "Should the U.S. Pull Out of NATO?" *The Wall Street Journal*, December 15. 1981. p. 30.

The decline in Europe's ability to influence events in the Third World was accompanied by an evolving strategic approach to Third World problems. European policies became increasingly dependent on political and economic instruments to influence events in the Third World. The American experience in Vietnam confirmed for many Europeans their skepticism regarding the current utility of military force in the Third World. And, the fact that the former colonial powers have retained or re-established close ties with their former colonies based in many cases primarily on the strength of political economic, cultural and linguistic linkages has reinforced the faith of our allies in these policy tools.

Today, European nations do not reject completely the importance of global Western military capabilities. Great Britain and France both made contributions to the Western naval presence in the Persian Gulf region in response to the Iranian hostage crisis and the Soviet intervention in Afghanistan. But our allies remain much more skeptical than are we concerning whether military intervention necessarily guarantees anything in the long term in the Third World, either for the United States or for the Soviet Union. The 1980 British White Paper on defense—the product of a Conservative government—states the European perspective quite clearly:

> The best answer is to try to remove the sources of regional instability which create opportunities for outside intervention. In some circumstances, military measures will not be appropriate at all; in others they may form only one component of the total response. *Diplomacy, development aid and trade policies will usually have a greater contribution to make.* [emphasis added]

West European leaders, for the most part, take the position that the West derives considerable security from the needs of Third World countries for access to Western markets and technology. They also believe that similar Soviet requirements for Western technology and other Western goods, such as wheat, tend to constrain Soviet temptations to intervene in Third World trouble spots. Many Europeans fear what they see as an American tendency to concentrate too narrowly on military responses to potential Soviet aggression, believing that other approaches might be more productive and less costly in terms of Western interests. They are at least equally—if not more—interested in developing economic ties and political bonds that will both ensure cooperative relations with Third World nations and discourage Soviet adventurism.

Furthermore, Europe has gained far more in tangible benefits than has the United States from the period of détente with the Soviet

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[13] For a discussion of European involvement in the Third World see: Sloan, Stanley R. "Sources of potential collateral support for U.S. objectives," in U.S. Congress, House, Committee on Foreign Affairs. Soviet Policy and United States Response in the Third World, prepared by the Congressional Research Service, U.S. GPO, (Washington) March 1981, pp. 241–270.

Union. This fact makes Europeans more inclined to see détente as "divisible" i.e., to want to protect the gains of détente in Europe even if the Soviet Union misbehaves in the Third World (such as in Afghanistan). The United States, carrying the majority of Western global military burdens, has a much greater interest in treating détente as "indivisible," with Soviet actions outside of Europe seen as providing cause for Western responses within the European framework.

Does military weakness generate faith in economic and political instruments of national purpose? To what extent do U.S. global military capabilities permit the West European allies to concentrate on non-military approaches? Does military strength generate an inclination to use force to further national objectives? Perhaps these questions frame the proposition too dramatically. But it nonetheless seems clear that differing world roles and military capabilities constitute another important source of divergent European and American approaches to East-West relations.

ECONOMIC FACTORS, A CONTINUING SOURCE OF DISAGREEMENT

It is a popular American belief that European attitudes toward East-West relations are driven to a significant degree by avarice—a taste for the fruits of expanded trade with the East. It is a popular European retort that American practice does not match its rhetoric when real American economic interests are called into question, i.e., grain sales to the Soviet Union. These images have been reinforced by the debate over economic sanctions in response to the Soviet invasion of Afghanistan and again following the declaration of martial law in Poland. Americans draw the conclusion that Western Europe already is too dependent on trade with the East and therefore is increasingly hostage to Soviet political objectives. Europeans conclude that the United States wants Europe to pay the price for sanctions made-in-the-USA.

It is a fact that trade between Eastern and Western Europe grew rapidly in the last decade. But as a percentage of total trade, trade with Communist countries has remained fairly constant in recent years. Since 1976, some 4.5 percent of the annual global imports of European NATO countries has come from Communist countries. Exports to Communist countries have in fact declined as a share of global exports. In 1976, European NATO countries sent 5.4 percent of their exports to Communist nations; in 1979, the share was only 4.6 percent.

It is also a fact that the United States trades far less with Communist countries than do the European allies. In 1979, Communist nations accounted for only 1.2 percent of U.S. imports. U.S. exports to Communist countries accounted for only 4.1 percent of its total exports. The differing ratios of trade with the East do not appear particularly significant on the surface.[14] Significance, however, grows out of the content of that trade and the differing expectations about the importance of the further development of trade with the East for future economic growth in the West.

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[14] See trade data in table I.

TABLE I.—TRADE OF NATO WITH COMMUNIST COUNTRIES,[1] 1976–79

[In millions of dollars]

Country/area	1976			1977			1978			1979		
	Total from (or to) entire world	From (or to) Communist countries	Trade with Communist countries as percent of world trade	Total from (or to) entire world	From (or to) Communist countries	Trade with Communist countries as percent of world trade	Total from (or to) entire world	From (or to) Communist countries	Trade with Communist countries as percent of world trade	Total from (or to) entire world	From (or to) Communist countries	Trade with Communist countries as percent of world trade
IMPORTS (C.I.F.)												
European NATO	367, 599. 3	16, 420. 7	4. 5	414, 190. 7	18, 063. 9	4. 4	484, 604. 5	20, 997. 6	4. 3	630, 222. 0	28, 464. 1	4. 5
Canada (f.o.b.)	37, 958. 6	341. 8	. 9	39, 542. 2	303. 5	. 8	43, 554. 7	338. 1	. 8	53, 518. 0	491. 2	. 9
United States (f.o.b.)	121, 794. 6	1, 069. 2	. 9	148, 704. 0	1, 338. 1	. 9	173, 249. 5	1, 833. 4	1. 1	207, 131. 1	2, 464. 8	1. 2
Total, NATO	527, 352. 5	17, 831. 7	3. 4	602, 436. 9	19, 705. 5	3. 3	701, 409. 1	23, 169. 1	3. 3	890, 871. 1	31, 420. 1	3. 5
EXPORTS (F.O.B.)												
European NATO	338, 042. 3	18, 305. 9	5. 4	392, 809. 0	19, 303. 8	4. 3	473, 862. 0	22, 799. 3	4. 8	593, 544. 1	26, 999. 0	4. 6
Canada	38, 633. 2	1, 248. 5	3. 2	41, 558. 5	1, 067. 4	2. 6	46, 147. 6	1, 406. 7	3. 1	55, 931. 6	1, 717. 8	3. 1
United States	114, 992. 4	3, 639. 9	3. 2	121, 242. 4	2, 716. 1	2. 2	143, 662. 7	4, 501. 1	3. 1	181, 801. 6	7, 407. 5	4. 1
Total, NATO	491, 667. 9	23, 194. 3	4. 7	555, 609. 9	23, 087. 3	4. 2	663, 672. 3	28, 707. 1	4. 3	831. 277. 3	36, 124. 3	4. 4

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[1] Albania, Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland, Romania, U.S.S.R., China, and Cuba.

The United States imports very little from Communist countries that it could not easily do without or get elsewhere. Its exports to Communist countries have included items, such as grain, that are of great importance to the East Europeans and the Soviet Union. Western Europe exports items of great value to Communist countries, particularly in industrial and high technology areas. But West European imports from Communist countries include some components vital to current and future European economic growth—natural gas for example. And so, on balance, Europe does have more to lose than does the United States from disruption of trade with the East.

Furthermore, relative United States and European dependence on foreign trade plays a role, particularly in terms of expectations concerning the future importance of that trade. European nations continue to depend much more heavily than does the United States on trade as a basic factor of economic well-being. Western markets now are saturated and highly competitive. West European industries are operating below capacity. One of the most attractive and natural possibilities for future trade expansion is with Eastern Europe.

Two issues within the Alliance provide focus for this point: the Polish debt question and plans for a new Soviet gas pipeline to Western Europe. In the Polish debt case, many Americans feel that Poland should be declared in default of its international financial obligations. From their point of view, such action would injure both the Polish martial law government and the Soviet Union and would clearly signal disapproval of martial law in Poland. The costs to the United States would be minimal. On the other hand, the burden of default would fall most heavily on West European banks and governments—most particularly in West Germany. Not unnaturally, West Europeans find many costs and few benefits in the default approach.

Similarly, many Americans believe that completion of the Soviet-West European gas pipeline would increase Soviet leverage over Western Europe. They therefore believe that the pipeline deal should be stopped. From the West European perspective, however, there is sufficient protection against increased Soviet political leverage and, in any case, Europe needs the job that the project would produce in the near term and the energy that the pipeline would bring in the future. At a time when many Europeans believe that American deficits and high interest rates are prolonging their economic recession, American pressure against the pipeline is seen as unreasonable.

Economic factors do, therefore, contribute to differing United States and European perspectives on East-West relations. The United States clearly is not heavily dependent on trade with the East, nor does it count on growth in that trade as a vital element of U.S. economic growth. West European trade with the East involves mutual dependencies, and whether the ultimate balance favors East or West is a matter for debate. The risks look worth taking to many Europeans, who also see trade as an important component of foreign policy, a source of Western leverage in the East. The cost/benefit relationship does not look nearly as favorable from an American perspective.

EVERY NATION A SPECIAL CASE

In addition to the general sources of differing perceptions identified in the preceding pages, there are special national cases, some of which have already been suggested. These special national circumstances can, in a given case, be the principal source of differences with U.S. approaches to East-West issues.

In particular, West Germany's approach is very much a product of the division of the German nation, the vulnerability of Berlin, and the limits (legal and psychological) on Germany's military capabilities. Given these special circumstances, a policy of strict confrontation with the East would entail far higher costs—in terms of security as well as economic and life-style costs—than for the United States.

The Polish crisis has highlighted the continuing importance of the post-World War II agreements which split Germany into two parts (a split which was intended at the time to be a temporary arrangement). At Yalta, the United States, the Soviet Union and Great Britain divided Germany into occupation zones which, with the advent of the cold war, became a de facto partition of Germany into Eastern and Western halves. This arrangement is one with which most of Europe has become very comfortable. If some Americans have forgotten the troubles created by a strong and aggressive Germany in the first half of this century, most Europeans have not. Even many Germans are wary of the destabilizing potential of German reunification.

Under such circumstances, Europeans may be understandably concerned about upsetting a European balance which has helped ensure peace for over thirty years. Columnist Joseph Harsch has observed that American cheers for Polish resistance to martial law make some Europeans nervous, writing that Europeans "are not ready to risk the destabilization of Europe to rescue the Poles." [15]

For Germany, being at the center of East-West relations means its national destiny remains largely in the hands of external forces. This has been given for West Germany's foreign and defense policy in the entire post-war period. Professor Alfred Grosser points out that West Germany "is the only Western country that still depends heavily on the international structures of 1944–45." [16] These "international structures" impose on Germany the strong influence of the United States, France, the United Kingdom, and the Soviet Union. It is therefore little surprise that German policy reflects to varying degrees sensitivity to the desires and interests of *all* of these countries. It is also not surprising that West German policy seldom pleases all of them equally, or that West Germany should from time to time appear frustrated with the practical limits on its sovereignty.

It also remains a fact, however, that for Germany there are no practical short-term alternatives to its current situation. Evolutionary developments might buy Bonn greater leeway to make some autonomous decisions in security policy, but very few Germans seek a radical change in West Germany's currently uncomfortable but relatively stable position between East and West.

France has traditionally defined a special role for itself in East-West relations. In the days of American strategic supremacy and unquestioned global leadership, France felt compelled to assert its independence both politically and militarily. Even though France acknowledged Germany's special position, French Governments traditionally claimed the role of Europe's unfettered leader in relations with the East.

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[15] Harsch, Joseph C., "Yalta and the view from Germany," *Christian Science Monitor*, January 8, 1981. p. 22.

[16] Grosser, Alfred. "Western Europe." in *The United States in the 1980's*, Peter Duignan and Alvin Rabushka (eds.) Stanford, 1980. p. 713.

Now that Germany's policy has become more assertive and less dependent on U.S. guidance, France has moved back toward an Eastern policy which is far more critical of the Soviet Union. This shift in the French role derives in part from the change of leadership in France, but also seems unmistakably linked as well to changes in the global power balance and to the more nationalistic Ostpolitik pursued by Bonn.

The United Kingdom's approach to East-West relations is a product of a number of conflicting pressures. As a leading member of the European Community, the U.K. remains torn between the continent and its Atlantic connections. Still declining as a military power, the U.K. nonetheless clings at great expense to its nuclear deterrent capability. A tradition of military power is counterposed against strong pacificist and unilateralist tendencies in British society. These conflicting pressures are reflected in British politics. The current Conservative government prefers a particularly hard line toward the Soviet Union. At the same time, the leadership of the main opposition, Labour, generally favors de-emphasis of military programs and expanded cooperation with the East.

In some alliance nations—speaking in particular about the Netherlands, Denmark, and Norway—pacifist sentiments have deep emotional and historical roots. In their extreme form these sentiments translate into outright opposition to membership in NATO. At a minimum, governments in these countries are obliged to lobby for arms control, nuclear disarmaments, and détente. The concentration on "peace" initiatives often conflicts with American concepts of the requirements for Western security and with American suspicion of Soviet motivations.

One American observer, Walter Laqueur, has popularized the term "Hollanditis" to describe what he sees as a growing tendency in Europe to try to escape some of the consequences of the East-West conflict.[17] Laqueur notes that "Neutrality (or neutralism) has been the traditional orientation of Dutch foreign policy for almost three centuries—as it has been of most of the other smaller European countries." He argues that today the neutralist tradition is being revived and that Holland and other European countries want to "keep out of world problems" and to avoid spending money on defense.

Laqueur's choice of terminology, of course, outraged many Dutch officials, whose perspective on their own approach to Western security might be reflected in the words of a leading Dutch defense expert and Socialist party whip in the Dutch parliament, Klaas de Vries:

> Many Europeans regard the American insistence that the Alliance must substantially increase its defense efforts in view of the ever-growing and all-consuming nature of the Soviet threat as an unbalanced approach to security. Europeans continue to devote considerable sums to defense, but popular support for current defense policies is dependent on retaining the dual emphasis of NATO's defense and détente policies. Public opinion will not support policies which concentrate solely on building up military capabilities as a means to ensuring security.[18]

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[17] Laquer, Walter. "Hollanditis: A New Stage in European Neutralism," *Commentary*, August 1981, p. 19.

[18] de Vries, Klaas. "Security Policy and Arms Control: A European Perspective." Paper prepared for the conference sponsored by the Arms Control Association, Washington, D.C., on "Nuclear Weapons in Europe: Modernization and Limitations," held in Brussels, 20–22 September 1981.

In the south of Europe, special circumstances also condition attitudes toward East-West relations. In Italy, the fact that the Italian Communist Party is more-or-less the permanent opposition to the Italian Government, has tended perhaps to make the non-Communist parties more anti-Soviet and pro-American than they might be if the Italian political system were dominated by competition and alternation between strong Christian Democratic and Social Democratic parties. The Italian political environment is also affected by the fact that the Italian Communist Party, striving to be recognized as a legitimate contender for a role in government, has, on occasion, been highly critical of the Soviet Union—the Polish crisis has provided the latest opportunity for a split between the PCI and Moscow.

The attitudes of Greece and Turkey are conditioned by their mutual antagonism. Both see each other as a more imminent threat than the Soviet Union, and this fact colors their attitudes toward the threat in general and toward defense cooperation in the southern region.

PUBLIC OPINION: A MIRROR OF DIFFERING PERCEPTIONS

THE ROLE AND IMPORTANCE OF PUBLIC OPINION

In the West European democracies as well as in the United States, foreign and defense policies are formulated with substantial regard to public opinion. Thousands of West European demonstrators have marched and rallied to protest nuclear weapons. American observers, in response, have warned that unless the allies "get their act together" the American taxpayer will no longer be willing to support the U.S. commitment to European defense.

Public opinion can be measured "scientifically" through modern, sophisticated polling techniques and technologies. But measurement and assessment of public attitudes on any issue is a complex undertaking. Public opinion is dynamic, not static. Politicians can "lead" public opinion—it is seldom a "given" that is immutable in any democratic political system. Events can produce distortions or dramatic shifts in public opinion. These shifts can persist if they are supported by long-term political, sociological, or economic trends. Or, they can be temporary, subject to modification with succeeding events or policy changes. Furthermore, the media can affect public opinion. The recurrence of headlines, the repetition of themes in print, on television or radio or in memorable cartoons, whether based on accurate assessments or not, can swing the public mood and perceptions.

CURRENT MISPERCEPTIONS

In 1981, all of these factors came into play in public attitudes toward United States-European relations. In Europe, much of the media and certain leaders of the anti-nuclear movement painted the picture of a United States gone wild, bound and determined to confront the Soviet Union, led by a reckless cowboy with six-guns at the ready. (The "peace offensive" launched by Soviet leader Brezhnev at the 26th Party Congress in February 1981 has sought to play on this image, contrasting it with Soviet initiatives in the area of arms control and disarmament.) In the United States, corresponding images characterized Europeans as weak-willed pacifists, duped by Soviet propaganda, manipulated by the KGB, and ready to unfurl the flag of surrender at the first sign of trouble.

If these popular images were accurate characterizations of American and European approaches to security issues, there would be no point in contemplating the future of the alliance: it would have none. The fact that these images are overdrawn caricatures, however, should not lead one to conclude that they are unrelated to the problems currently facing the alliance. The continuation of the alliance clearly depends on some level of popular consensus in NATO nations that the benefits of alliance justify the costs. The answer to two questions raised by currently-popular images may help determine whether the consensus can be rebuilt or is permanently flawed. The first question is whether the anti-nuclear movement which grew so dramatically in 1981 signifies that Europeans are increasingly anti-American, pacificist, and neutralist. The second is whether it is true that Americans are bent on confrontation with the Soviet Union and have cast détente and arms control aside.

TRENDS AND POLICY IMPLICATIONS

First, what are the trends in European attitudes toward the United States and the Alliance? The United States International Communication Agency (USICA) has conducted extensive polls over the years to gauge European public opinion on these issues. Two ICA analysts published in September 1981 their assessment of current European attitudes, set against a wealth of historical data.[19] Their findings, summarized below, are not entirely consistent with the headlines:

> *On the Soviet threat:* "Only a limited minority (one in five in Britain, fewer elsewhere) were 'very' concerned about either a Soviet attack or political intimidation."
>
> *On the current military balance:* "While surveys conducted during the 1970s show a tendency for West Europeans, especially in Britain and Germany, to believe that the balance of military power was shifting to the U.S.S.R., March 1981 data suggest that this trend has been halted."
>
> *On the preferred military balance:* ". . . many West Europeans not only *perceive* (by pluralities in most cases) military equality, but most clearly *prefer* it to American superiority. They are concerned that an imbalance could heat up the arms race, make negotiations more difficult, and tempt the inferior power to consider a first strike."
>
> *Support for NATO:* ". . . West Europeans still support NATO. Large majorities except in France, which belongs only to the political side of NATO, favor continued membership." Support is "widespread and reasonably stable."
>
> *Neutrality as an option:* After warning that "Neutralism is hard to define" and noting that majorities in most European countries would prefer to "stay out of conflict or war", the authors report ICA's attempt to get at "hard-core" neutralist sentiment in March 1981. ICA asked Europeans: "All things considered, do you think it is better for our country to belong to NATO, the Western defense alliance, or would it be better for us to get out of NATO and become a neutral country." Their results supported the conclusion that neutralist sentiments *are not* widespread, except in France. (In France, where the neutral option ran even with the NATO option, opinions undoubtedly reflect France's half-in and half-out NATO involvement.)
>
> *Better red than dead:* Based on West German data, the authors conclude that "While many West Germans are willing to see a conventional defense of their country against any attack, they are clearly unwilling, and have been for some time, to see a nuclear defense of their soil." They observe that "If these findings do not represent a feeling of 'better red than dead,' they do suggest a feeling of 'better red than incinerated.' "
>
> *Increased defense spending:* There is an apparent inconsistency between European preference for a conventional defense and their apparent resistance to proposals for increased defense spending which would be required if NATO were to rely more on conventional than nuclear weapons. Most Europeans would prefer to keep defense spending at current levels, and there is precious little support for increased spending. Perhaps the apparent inconsistency can be explained in

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[19] Adler, Kenneth and Wertman, Douglas, "Is NATO in Trouble? A Survey of European Attitudes," Public Opinion, August/September 1981. Pp. 813, 50.

part by the fact that many West Europeans "do not feel particularly threatened by the Soviet Union." The authors suggest that other factors may include economic problems and opposition to cuts in social services, a feeling in smaller countries that increased efforts on their part make very little difference, and a preference for arms control efforts to enhance security.

Deployment of new theater nuclear weapons: Surveys in the last two years have consistently found strong opposition to the stationing of new ground launched cruise or extended-range Pershing II missiles on European soil. Levels of opposition to stationing of new long range systems are consistently and considerably higher than any indications of anti-Americanism, neutralism, or pacificism, suggesting that there are many pro-Americans, pro-NATO, pro-defense Europeans who nonetheless object to the new systems.

The conclusion of the ICA authors is that "NATO as a formal organization is not in trouble among the mass publics, at least not yet." Europeans want a strong but not overwhelmingly armed America; they welcome strong U.S. leadership in the world. They remain, for the most part, committed to the Alliance. At the same time, they do not believe that the nature of the threat warrants dramatic increases in defense spending. And, they look for evidence that the United States is making a genuine attempt to reduce tensions and negotiate arms control agreements with the Soviet Union.

More recent polls have tended to reinforce the general picture painted by the ICA data. For example, the West German Allensbach Opinion Poll Institute reported in October 1981 that their most recent data showed that 59 percent of those Germans questioned would regret an American withdrawal from Europe while only 17 percent would welcome it. Furthermore, when asked whether they "liked" Americans or not, 56 percent said that they liked Americans while only 18 percent answered "not particularly." [20] In sum, the public opinion indicators do not support the headlines which proclaim that neutralism and anti-Americanism are spreading like wildfire across Western Europe.[21]

There is, however, an important footnote. The ICA data do reveal a somewhat divergent set of attitudes on the part of what has now become popularly known as the "successor generation." Particularly on the choice between neutrality or NATO, many more respondents in the "university-educated 18–34" age group choose neutrality than in the "35–49" or the "50 and older" groups. Even among the young group, NATO wins a significant majority. But the trend, however slight, suggests that time and events have been eroding NATO's political base.

The challenge for American policy makers who want to ensure the future of the alliance is to adopt policies which respond to today's security problems and which have sufficient credibility to attract the support of future generations of Europeans. The danger of headlines and policy proclamations which incorrectly portray the state of European public opinion is that they could become a self-fulfilling prophecy. Europeans who support NATO and are favorably inclined toward Americans cannot reasonably be called "anti-American neutralists or pacifists" because they march against nuclear weapons. If American policy should be seen as equating anti-nuclear sentiment with anti-Americanism or neutralism, some of these Europeans might decide that their anti-nuclear position is inconsistent with their other attitudes toward the alliance. On the other hand, other Europeans may decide that the United States, by defining anti-nuclear attitudes as anti-American, has dismissed their concerns and is no longer taking European interests into account. Under these circumstances, it is entirely possible that the United States will lose more friends than it gains supporters of new nuclear deployments.

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[20] *Frankfurter Allgemeine Zeitung,* October 30, 1981, p. 11. (As reported by the Foreign Broadcast Information Service, Daily Report, Western Europe, November 2, 1981, p. J3.)

[21] In some respects, the current period is reminiscent of the mid-1970's when it was popular with journalists and even with former high level officials, such as Henry Kissinger, to proclaim that Eurocommunism was spreading across Western Europe when such assertions were not supported by the most political and sociological indicators in Europe.

Second, how accurate is the European image of Americans as determined cold warriors bent on confrontation with the Soviet Union? As in the case of American perceptions of European attitudes, this image is seriously flawed. Public opinion data on U.S. attitudes do support the contention that Americans favor rebuilding American military strength. When asked in mid-1981 whether "we must build up our military strength so that we are clearly No. 1 and use this strength whenever necessary for our national interests, even if other nations complain," 73 percent of those participating in the poll agreed, while only 22 percent disagreed.[22] This and similar results in recent polls is perhaps the main support for the European image of an excessive American propensity to depend on military force to guarantee national interests.

But other results of the same poll qualified this image. Of those questioned, 65 percent favored reopening strategic arms talks with the Soviet Union, while only 25 percent opposed. And, on related issues, 47 percent opposed *keeping* military advisers in El Salvador while 35 percent were in favor. On the question of whether the United States should give economic and military support to anti-Communist allies even if they violate human rights, 67 percent opposed such aid while only 23 percent were in favor. These data do not support the image of Americans as adventurous or willing to take risks or make substantial commitments based on a single-minded anti-Communist obsession.

Furthermore, an ABC News/Washington Post poll in June 1981 found Americans in substantial agreement with European citizens on a vitally-important issue. When asked "Do you think that the United States should seek military superiority over the Soviet Union or should the United States reach some agreement with the Soviet Union that would leave both countries as equal as possible in military strength?", 65 percent opted for arms control and equality. Only 31 percent said that the United States should seek military superiority without attempting to negotiate overall military parity.[23]

In sum, recently-popular European images of Americans find some basis in fact but draw as well on large doses of fantasy. There *is* strong support in the United States for efforts to rebuild American military capabilities. Many Americans would feel more comfortable if the United States were superior to the Soviet Union. But, at least in some polls, most Americans would be willing to live with a condition of overall parity. An overwhelming majority of Americans want the United States to try to negotiate arms control agreements with the Soviet Union. Americans would support the use of military force when vital American interests are threatened, but there is a strong residue of opposition to any military involvement that even vaguely resembles the start of "another Vietnam."

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[22] *Time Magazine*, June 1, 1981, p. 12.

[23] Alderman, Jeffrey D., ABC News/Washington Post Poll, conducted May 18–20, 1981, aired June 8. 1981. (The fact that the response to this question apparently conflicts with the support in the previously-cited poll for military superiority appears to reaffirm that the manner in which a question is asked and the way that the poll sample is constructed can affect the outcome. This response does not appear out of line, however, when considered in relationship to the combination of the answers in the previous poll to the questions about military superiority and arms control.)

European policy makers who care about the future of the Alliance should therefore weigh carefully statements which tend to support faulty impressions of American attitudes. If Americans are continually confronted by incorrect portrayals of what they think and stand for, they will find it increasingly difficult to sustain a sense of identity with Europeans and with the purposes of alliance.

Perhaps a better awareness of some of the factors discussed in the first section of this paper would help both Americans and Europeans understand that divergent perspectives are not the product of malicious intent or irrational reactions. They derive from profound and, to some extent, immutable factors over which leaders on either side of the Atlantic have little control. The question is whether the differences that do exist can still be accommodated within the framework of the Atlantic alliance or whether the Alliance no longer effectively provides an acceptable balance of costs and benefits to both the United States and the allies. This issue is discussed in the concluding sections of this study.

IMPLICATIONS FOR THE ALLIANCE

Alternative Analyses of the Crisis

How serious is the crisis? It is a fact that the history of NATO is filled with a succession of crises—each successfully overcome. Is this but the latest which also will be overcome? Or, is this crisis so qualitatively different from previous challenges to the cohesion of NATO that it signals a watershed and calls for (or threatens) revolutionary policy changes?

A NEW AND PROFOUND CRISIS

A number of analysts argue that NATO has outlived its usefulness. Irving Kristol, a leading conservative writer, was making this argument long before the crisis assumed its current proportions. Addressing a conference in Brussels marking the 30th anniversary of the alliance in 1979, Kristol judged that "after an initial decade of quite vigorous existence, NATO has ceased to be a living reality for some years now. I also anticipate that, sometime in the not too distant future, the appropriate formal funeral services will occur." [24]

Other observers have joined Kristol in his analysis. Ronald Nairn, a West Coast businessman and journalist, has written that "The time has come for the United States to sever its ties with NATO." [25] Nairn argues that the United States gains little from the alliance with Western Europe, and that withdrawal is justified "simply in the pursuit of America's long-term strategic interests, taking account of any other realistic, attainable options. For Nairn, these "attainable options" include refocusing American economic and security interests on the Pacific basin.

Other analysts argue that it is useless to continue to try to fortify NATO's conventional defenses and that current NATO strategy runs counter to American interests. The author Laurence W. Beilenson and nuclear physicist Samuel T. Cohen have recently argued that:

> To remain so entangled is to invite a Soviet nuclear strike against the United States in any war that starts in Europe—to risk our national survival. We can survive without the Western alliance, even if the Europeans elect to accommodate to the Soviet Union rather than provide for their own defense. But nuclear war can kill us.[26]

Even a number of analysts who do not reject the centrality of NATO to American security interests judge that the current crisis is something special and dangerous. Professor Simon Serfaty has judged that "there is something new in the 1982 model of the Atlantic crisis":[27]

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[24] Kristol, Irving. "Does NATO Exist?" Paper prepared for the Conference sponsored by the Center for Strategic and International Studies on NATO: The Second Thirty Years, held in Brussels, September 1–3, 1979.

[25] Nairn, Ronald. "Should the U.S. Pull Out of NATO?" *Wall Street Journal*, December 15, 1981.

[26] Beilenson, Laurence W., and Cohen, Samuel T., "A New Nuclear Strategy," *New York Times Magazine*, January 24, 1982, pp. 42, 44.

> Now, the tedious issues of the past are no longer pressuring the structures of the alliance one at a time and under conditions of overwhelming U.S. military superiority, economic affluence and over-all ideological compatibility. Instead, they are all being felt at the same time under circumstances of economic crisis, military insufficiencies and ideological differences.

Henry Kissinger agrees. He argues that the NATO allies have been avoiding difficult decisions for a decade and now face an accumulation of inconsistencies in alliance policies and postures. According to the former Secretary of State, the alliance "does not have a common philosophy or a common platform from which to resist Soviet blandishments or the pressures from its own constituents. To pretend otherwise only guarantees the acceleration of the current deterioration."[28]

American critics of the alliance who see the problems as originating largely in Europe have their counterparts in Europe. While the majority of Europeans still support NATO as do most policy-level officials and experts, some European observers see American and European interests as increasingly divergent, justifying a rethinking of the alliance. Unacceptable American attitudes toward East-West relations, conflict in the Third World, and required defense efforts are generally offered as the case for a more independent European policy—a mirror image of the American complaints.

THE LATEST OF A SERIES OF CRISES

A number of analysts would nonetheless argue that the current crisis may have its unique features, but so have past crises. For these analysts, the new differences must be accommodated but the determining factors remain those which have not changed. The Atlantic alliance, according to this view, remains the only credible framework for maintaining East-West military stability in Europe and for cooperative relationships among governments in the Atlantic area. Perhaps most importantly, they argue, no other framework provides a "home" for the Federal Republic of Germany which is compatible with both Eastern and Western security interests.

Former State Department official Anton DePorte summarizes the case for continuity in the following terms:

> The European state system developed by the cold war and completed by the arming of Germany in 1955 remains intact today. It will continue to be challenged by developments in the years to come, as it has been in the past. These challenges will have to contend againt the hard factors which have maintained the structural stability of the European state system against the many serious challenges of the last quarter-century . . . . The Western Europeans are likely to want to maintain a visible and structured alliance with the United States—in fact, the Atlantic alliance we have—to provide them with security. The United States, for its part, will almost certainly continue to play its established role in the Euratlantic subsystem.
>
> The ties of alliance will be reinforced by common interests of other kinds, not least by the understanding of the member states that they have no real alternative to maintaining an effective and cooperative economic system among them.[29]

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[27] Serfaty, Simon, "The Atlantic Crisis—I," *The Baltimore Sun*, January 12, 1982, p. 7.

[28] Kissinger, Henry, "Something Is Deeply Wrong in the Atlantic Alliance," *Washington Post*, December 21, 1981, p. 21.

[29] DePorte, A. W., *Europe and the Superpower Balance*, Headline Series 247, published by the Foreign Policy Association, December 1979, p. 75.

Based on this judgment about the vital importance of the factors of continuity, other analysts have responded to those who claim that today's crisis requires a revolution in the organization of Western security. Robert G. Livingston, former head of the German Marshall Fund, emphasizes the importance of the alliance for internal Western stability:

> NATO was conceived to provide security not only against a Russia that is aggressive but also against a Germany that once was aggressive in the past. Together with the European Economic Community, the Alliance constitutes a framework within which German talents and energies turn to constructive and cooperative use. . . .
>
> Pique and petulance about allies who are stronger but also less deferential than they used to be should not tempt us into threats that could shatter a structure that serves our defense and the peace of Europe in many ways, including some that we seem to have forgotten.[30]

Another observer has warned that we may be "talking ourselves into breaking up the alliance." Journalist Morton Kondracke argues that, on both sides of the Atlantic, we are "maximizing the differences between partners, picking at scabs, ignoring the vital interests we have in common. . . . Intellectuals and op-ed writers ought not try to write off the alliance before its time. Those now engaged in doing so may detest the Soviet Union, but they are doing Moscow's work."[31]

In any case, it seems clear that there is a crisis in the alliance. The basic difference among analysts seems to be whether or not the current sources of friction outweigh the traditional sources of alliance cohesion. Contending perspectives on this question may well frame the debate over how to resolve the crisis.

ALTERNATIVE FUTURES FOR THE ALLIANCE

Talking about "alternative" futures for the alliance could give the impression that the United States can "choose" among various futures for NATO. That impression, of course, would be misleading. American policies can be designed with certain objectives in mind, but there is no guarantee that those objectives can be attained. In the increasingly interactive global environment, every action produces numerous reactions. Predicting what those reactions will be is problemmatic at best. In the case of European security, the future will be determined not only by our policy choices but also by those of our West European allies, the Soviet Union and its allies, China, and, to an increased extent, those Third World countries that control vital natural resources.

Even in such an uncertain policy environment, however, coherent American policies must be set against some concept of objectives. Traditional American policies toward the Western alliance have sought to maintain the basic structure of United States-European coordination of defense efforts and policies toward the East, including arms control policies. They have also sought to expand the areas of political and economic cooperation among the allies as a supplement to military security measures. In addition, while American administrations long ago abandoned the objective of European defense autonomy as a realistic near term objective, U.S. administrations and the Congress have nonetheless continued to urge the Europeans to increase their defense efforts relative to those of the United States. It is this general approach which now has been called into question once again by critics of the alliance.

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[30] Livingston, Robert G., "Punish Our Allies?", *The Washington Post,* January 3, 1982, p. C8.

[31] Kondracke, Morton M., "Talking Ourselves Into Breaking Up the Alliance?", *The Wall Street Journal,* January 7, 1982, p. 21.

What are the theoretical alternative futures for the alliance, and what are some of the arguments for and against those futures? The following list suggests the range of futures that might be imagined as possible in the next 20 years, with a few comments about the arguments concerning whether each is desirable or feasible.[32]

REASSERTION OF AMERICAN PREEMINENCE

This future suggests a requirement for reestablishment of U.S. military superiority, including nuclear superiority over the Soviet Union; clear economic and political preeminence in relations with the European allies; and the ability to influence positively the policies of third world raw material producers.

Desirability/feasibility

—In terms of the U.S. ability to achieve its national objectives this future probably would be most advantageous; it would provide substantial policy flexibility, and would ensure a substantial margin of military security.

—Whether or not this would be within the realm of the possible is another question. The attempt to obtain military superiority over the Soviet Union probably would require economic sacrifices that would weaken the United States in other ways. Furthermore, there is no reason to believe that the Soviet Union would sit idly by while the United States strove for superiority. And, there is reason to doubt whether the American economy could become as strong and invulnerable to outside influences as this future would require.

CONTINUITY

This future suggests more or less the same approach to the alliance as has become traditional for American administrations. It is, in some ways, a "muddle through" approach, encouraging evolution within alliance structures to accommodate changes in the international environment but avoiding sudden or destabilizing shifts in the overall framework.

Desirability/feasibility

—This approach has been responsible, at least in part, for peace in Europe for over 30 years. It has also helped to ensure stability within Western Europe, a significant departure from European politics in the first half of this century.

—On the other hand, given the decline of American military power relative to the Soviet Union and the relative increase in West European economic and political influence and confidence, the current set of alliance relationships includes many frustrations for the United States.

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[32] This list of theoretical futures assumes no major hostilities in Europe in this time period. It also assumes that the Warsaw Pact will remain more-or-less intact and that arms control agreements in the next few years are unable to remove the sources of East-West tension.

—The substantial American commitment to European defense makes it more difficult for the United States to deal with threats to Western interests in other parts of the world.

—In terms of feasibility, if the United States decides that the benefits of the current alliance framework still outweigh the costs, the current approach undoubtedly can be sustained into the future, particularly if alliance structures remain sufficiently flexible to adjust to changing international circumstances.

REARRANGEMENT OF RELATIONSHIPS

This suggests various changes in alliance relationships which go beyond the type of evolutionary development that has characterized the last thirty years. A number of theoretical futures fit into this category:

a. *Independent Europe, allied to the United States.*—In such an arrangement, Western Europe would assume most of the burden for its own defense through coordinated foreign policy and defense planning—including nuclear cooperation—in some sort of European defense community. This more autonomous Western Europe would remain on close and friendly terms with the United States.

Desirability/feasibility

—In the early postwar years, this future clearly was viewed as highly desirable. American overseas commitments could be reduced and a united Europe would provide a framework for internal West European stability as well as for an acceptable military balance in central Europe.

—In exchange for a reduction in American commitments, the United States inevitably would lose a degree of influence over West European security policies as well as over East-West security relations. How much influence would be lost is a subject for speculation.

—This future has not been realized for a number of reasons. Even though Western Europe has been a zone of peace since World War II, traditional national rivalries and differences have been subordinated but have not disappeared. A sense of European unity and the institutions to reflect that sense have developed very slowly, and the process only now is beginning to produce vague outlines of common foreign policy.

The prospects for a European defense community remain complicated by issues of nuclear sharing, particularly the role of West Germany in the control of nuclear weapons. And so, current political circumstances would suggest considerable difficulty in moving quickly from the current alliance framework to this alternative future.

b. *Independent Europe, tending toward neutralism.*—In this theoretical future, Western Europe would move to defense autonomy but would do so in the context of worsened relations with the United States. Western Europe would constitute an independent "third force" balancing its policies between those of the United States and the Soviet Union.

Desirability/feasibility

—Some analysts have argued that it would make no significant difference to American interests if Western Europe were to move in this direction. This apparently remains a minority perspective. Most analysts would judge that, in such a future, the United States would be less able to influence the course of international events and would be less secure than it is today.

—The practical obstacles to the formation of such a united West European defense/foreign policy community in this alternative future are similar to those suggested in the "allied-to-U.S." variant, but perhaps even more difficult for the Europeans. The costs of establishing a credible "third force" posture would be immense. It consequently seems likely that an independent but neutral Europe would come about only in the context of serious policy differences and emotional controversies with the United States. It is an open question whether the alliance has now entered a period in which such an outcome has become more likely.

c. *Fragmented Europe, susceptible to Soviet pressure.*—Another potential future, following American disengagement from an active role in European defense, could find Europe fragmented, unable to organize a coherent defense/foreign policy community, unable to control internal tensions, and increasingly dependent on the good will of the Soviet Union for its security guarantee. Such a future could presumably include varying degrees of West European dependence on the Soviet Union, with West Germany being the most susceptible to Soviet influence given the diversion of the German nation and the vulnerability of Berlin.

Desirability/feasibility

—Again, some analysts argue that the United States could survive and, indeed, prosper, in such an environment. Most analysts, however, would likely judge this future as including serious disadvantages for American interests. The balance of global power might well tilt dramatically toward the Soviet Union and internal West European tensions could increase the potential for war or for Soviet intervention to prevent war.

—West European nations certainly do not regard such a future as desirable, and so there would be strenuous efforts to avoid fragmentation. But without the United States playing a pivotal role in the European balance, the outcome would remain largely in the hands of the West Europeans and the Soviet Union. In other words, such an outcome is more feasible under current political conditions in the absence of an American role.

d. *Fragmented Europe, subordinated to Soviet interests.*—In this potential future, the West European countries would be in more-or-less the same status as the East European countries—technically independent but for practical purposes dependent on the good will of the Soviet Union for their future security. Whether or not this condition were formalized by the stationing of Soviet troops or through bilateral cooperation and non-aggression agreements, the West European countries would in most decisions about security policy act deferentially toward Soviet interests.

Desirability/feasibility

—Some analysts have gone so far as to suggest that should the Soviet Union invade and conquer Western Europe it would suffer a "bad case of indigestion." And, in the case of Soviet domination of Western Europe, Moscow would face even more trouble controlling an unwieldy empire than it does now with Eastern Europe. They consequently dismiss the potential "loss" of Western Europe as not central to American interests. This minority perspective notwithstanding, most analysts believe that Soviet control of Western Europe would amount to a clear loss of power and influence for the United States and would directly threaten the security and economic well-being of this country.

—It is hard to imagine the Soviet Union obtaining this degree of influence or control over Western Europe without resistance from within Western Europe. In other words, we probably would not arrive at this potential future without passing through at least limited conflict in Western Europe, following an American withdrawal, between pro-Moscow elements and pro-Western forces. While this potential future is perhaps the most costly in terms of U.S. power and influence, it may also be the most unlikely.

MAJOR VARIABLES AND UNCERTAINTIES

In sum, it seems highly unlikely, no matter what policy objectives the United States selects, that the alliance will move in the near term either toward a reassertion of American preponderance or, on the other extreme, fragmentation of Western Europe and subordination to the Soviet Union. The more likely range of possibilities lies somewhere in between.

Continuity with traditional American approaches to the alliance does not promise an early end to the expensive U.S. troop presence in Europe or an end to the frustrating process of coordinating policies with recalcitrant allies. Continuity does, however, narrow the range of uncertainty about the future and perhaps contains fewer risks than other alternative futures. But if one concludes that the alliance is not central to American interests, an evolutionary approach may fail adequately to protect U.S. interests in the future.

Any break with traditional American approaches to the alliance promises more uncertainties than does an evolutionary approach to the alliance. The formation of a "United Europe" would, in theory, relieve the United States of some difficult burdens. U.S. policy since World War II has encouraged European integration without trying to force the pace of the process. Would "shock treatment" finally convince the Europeans to overcome all the traditional obstacles to greater unity? How can the shock treatment be applied without stimulating European unity on terms that are potentially unfavorable to U.S. interests—in other words, a united but neutral Western Europe? Even if the Europeans decided that, in principle, they wanted to organize an independent defense in alliance with the United States, could they do it?

How great is the risk that the European nations, left more-or-less to organize their own defense, would be driven apart and into the arms of the Soviet Union? Are the benefits of disengagement from European defense worth the potential risks of this or other potential consequences?

There are no certain answers to any of these questions. The answers ultimately lie in the realm of subjective judgment, and each analyst, official, Senator and Representative must ultimately make his or her own best bet. The next pages discuss in particular how these issues may be presented to the Congress for consideration, debate, and, perhaps, judgment.

OPTIONS FOR THE CONGRESS

SOURCES OF CONGRESSIONAL INFLUENCE AND POWER

The Congress has always played an influential role concerning the U.S. commitment to European defense. On June 11, 1948, the United States Senate passed the so-called Vandenberg Resolution which recommended "the association of the United States by constitutional process, with such regional and other collective arrangements as are based on continuous and effective self-help and mutual aid. . ." This act paved the way for negotiation of the North Atlantic Treaty. The Congress was directly involved in the negotiations, influenced a number of issues concerning the scope of alliance commitments, and the Senate consented to the treaty in 1949.

Since that time, the Congress has maintained its involvement in a number of ways. Most importantly, perhaps, it has made crucial decisions throughout the period affecting the size, equipment, and readiness of U.S. forces committed to NATO. Since the late 1950's, Congress has also considered from time-to-time the larger question of whether or not the American commitment to NATO was appropriate in changing international circumstances.

In particular, between 1966 and 1974 the Senate was urged on a number of occasions to consider a withdrawal of U.S. forces from NATO. The leader of the movement to withdraw was former Senator Mike Mansfield. Senator Mansfield's first withdrawal proposal was presented in 1966, but not until 1971 did he present his resolution in a form that required up or down votes in the Senate. The last "Mansfield amendment" was voted down in 1973, suffering the fate of similar initiatives in previous years.

Senator Mansfield's efforts were based on his judgment that the economic health and political maturity of the West European allies combined with the blossoming of East-West détente made the U.S. presence unnecessary. He was joined in this assessment, and on votes in the Senate, largely by liberal Democratic members. The Mansfield amendments were defeated by coalitions of moderate to conservative Republicans and Democrats.[33]

In the last decade, the Congress has used a number of legislative devices to affect the relative U.S. share of NATO burdens or to encourage specific adjustments in the U.S. commitment.[34] Some notable examples include:

—*Jackson-Nunn Amendment.* In this amendment to the DOD Authorization Act, 1974, the Congress required that the European allies offset the balance of payments deficit incurred by the United States as a result of the 1974 costs of stationing U.S. forces in NATO Europe. Failure to offset would have resulted in automatic reductions in U.S. force levels. On June 2, 1975, President Ford reported that the deficit had been more than fully offset and that the troop reduction provisions of the Jackson-Nunn amendment would not have to be implemented.

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[33] For a detailed history of the Mansfield proposals see the CRS report by Charles R. Gellner entitled "The Mansfield Proposals to Reduce U.S. Troops in Western Europe, 1967–1973," June 25, 1980.

[34] For a discussion of burden sharing history and issues see IB 81067, "Defense Burden Sharing: U.S. Relations with NATO Allies and Japan," [by Stanley R. Sloan] Congressional Research Service.

—*DOD Authorization Act, 1975.* In an amendment to this act, the Congress required that U.S. support forces in Europe be cut by 18,000 men, authorizing the Secretary of Defense to increase combat personnel in Europe by an equal number.

—*Levin Amendment.* In an amendment to the DOD Authorization Act, 1981, the Congress required that the Secretary of Defense report on allied progress toward meeting the 3 percent spending objective, to describe cost-sharing arrangements within NATO and with Japan, and to explain efforts being undertaken to "equalize" the sharing of defense burdens with NATO allies and Japan. The provision also expressed the sense of Congress that the President should seek increased support from host nations for the cost of maintaining U.S. forces there.

—*Eagleton amendment.* During floor debate on the fiscal year 1982 DOD procurement authorization bill, Senator Eagleton proposed an amendment which would have required cutting U.S. force levels or monies expended in NATO countries which failed to meet the objective of 3 percent real increases in defense expenditures in 1982. A similar provision would have applied to Japan. In both cases, the President could waive the requirement by certifying in writing to the Congress that such waiver was warranted by potential adverse effects on U.S. national security. The Senator withdrew the amendment following floor discussion during which Senator Tower, Chairman of the Senate Armed Services Committee, assured that the committee would continue to monitor closely European and Japanese defense efforts.

The Congress today retains the ability to shape the U.S. commitment to NATO. Its influence can be applied most directly through the DOD authorization and appropriation process, or in trade-related or foreign assistance legislation. In addition, the Congress can use hearings, reports, the media, and a number of informal channels to influence U.S. policy in this area.

Congressional decisions on some current issues in East-West relations could, in the extreme, encourage profound changes in the Western alliance. Complex political and economic linkages make it impossible to isolate the alliance from U.S. policy decisions regarding Poland or the Soviet Union. For example, congressional moves either to precipitate a Polish default or to stop the West European-Soviet gas pipeline could bring the current crisis of confidence within NATO to a head. The outcome could be toward re-establishment of NATO unity along lines preferred by the United States. Or, the outcome could lead to the further disintegration of the alliance. Policy choices on these issues therefore relate in the long term to congressional judgments about the importance of the alliance. But, even given the profound importance of these issues, the most direct decisions the Congress makes concerning the future of the alliance relate to U.S. troops in Europe.

MAJOR OPTIONS REGARDING U.S. TROOPS IN EUROPE

Many members of Congress once again are seriously questioning the wisdom of the current U.S. commitment to NATO. This sentiment, which was largely quiescent throughout most of the 1970's, has been revived by the issues discussed earlier in this report, particularly the disagreements with the European allies over the appropriate balance between defense and détente policies in relations with the East.

What options are available to the Congress under current circumstances? With regard to U.S. troops in Europe—the main source of congressional influence over policy—the Congress has three general options. The Congress can either support maintaining current levels, mandate a gradual withdrawal from Europe, or require a rapid withdrawal. (An increased U.S. commitment is not currently being proposed.)

MAINTAIN CURRENT LEVELS

This congressional option is compatible with the "continuity" future for the alliance discussed earlier in this report. A congressional decision to continue to support approximately the same levels of U.S. commitment to the alliance would, relative to the other options, minimize uncertainties in alliance and East-West relations. This option would also leave open the possibility for negotiated United States-Soviet conventional force reductions.[35] It would, however, not relieve the dilemmas confronting the United States concerning how to meet new defense commitments elsewhere in the world. This option certainly would not preclude traditional efforts to "get the allies to do more" or even to gradually shift some defense responsibilities from the United States to the allies. But it would constitute a signal to the allies and the East and the United States intends to continue to play a central role in the European security equation.

GRADUAL WITHDRAWAL

This option would deliver a somewhat different signal. A congressional mandate to begin a phased withdrawal from Europe would represent a judgment that U.S. national interests are not expected to require a decisive U.S. role in European security by 1990. This approach would allow the United States to reallocate gradually its defense resources to other priorities, although the amounts that could be reallocated clearly would depend on the phasing of the withdrawal. If the troops which are withdrawn are not disbanded, then very little in the way of economies could be expected. This policy approach would open the way to the possible "rearrangement" options discussed earlier in this paper. All the uncertainties concerning these potential futures would gradually come into play as a result of this option.

RAPID WITHDRAWAL

A decision by the Congress to mandate rapid withdrawal of American forces from Europe would be a revolutionary change in U.S. policy toward the alliance. It would accelerate the process which would be played out over many more years in a gradual approach to withdrawal. The Europeans would be faced immediately with all the difficult choices concerning European unity, nuclear cooperation, accommodation with the Soviet Union, and so forth. In this option, the United States presumably could realize major economies if withdrawn troops are demobilized or would have considerable flexibility in reallocating defense resources to strategic programs or to commitments elsewhere on the globe. Any prospect for negotiated force reductions in

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[35] For a discussion of recent developments in this area, see: "Warsaw Pact Proposes New Draft Treaty in Vienna Force Reduction Talks," Congressional Research Service Policy Alert (by Stanley R. Sloan), February 25, 1982.

Europe would be foregone; whether or not the Soviet Union would respond by making unilateral reductions of its own in Eastern Europe remains unknown.

AN UNCERTAIN FUTURE

In conclusion, none of the options for Congress include any solid guarantees about the future. Even continuity with past policies contains a mixture of certainty and uncertainty. If the United States should decide to withdraw forces from Europe, the net gain or loss for American security would be determined in part by what we decided to do with the assets that are freed for other uses. But our balance sheet would also be determined in large part by the subsequent decisions of our allies and adversaries. It is theoretically possible that U.S. withdrawal would lead to a more united Europe allied to the United States, a stable, more peaceful European continent, and to a net increase for American national security. On the other hand, it could lead to an independent but neutral Europe, a fragmented Europe greatly influenced by the Soviet Union, or Soviet domination of the entire continent.

Given the vital importance of these choices to the nation and the world, Congress undoubtedly will want to examine with great care the nature of the current relationship with the allies, the overall East-West framework, and the advantages and disadvantages of the various possible futures for the alliance. Ultimate decisions on the issue of the U.S. commitment to NATO will by necessity be subjective and framed by doubt, but a clear sense of objectives and priorities would at least help narrow the range of uncertainty.

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97th Congress }
2d Session }

COMMITTEE PRINT

NATO: CAN THE ALLIANCE BE SAVED?

REPORT

OF

SENATOR SAM NUNN

TO THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

MAY 13, 1982

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LETTER OF TRANSMITTAL

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, D.C., May 13, 1982.

Hon. JOHN TOWER,
Chairman, Committee on Armed Services,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: During the timeframe January 3 to January 14, 1982, I traveled to Europe to examine the current political and military situation with respect to the NATO Alliance. I reported to the committee on a similar trip in 1974 in my report. "Policy, Troops and the NATO Alliance," and again in 1977 with the late Senator Dewey Bartlett in "NATO and The New Soviet Threat."

I visited with political and military leaders as well as civilian experts in several of the major NATO countries. In addition, I met with representatives of the European Community and a large number of the NATO representatives in Brussels. I spent a considerable amount of time with General Bernard Rogers at SHAPE Headquarters discussing the military problems and other issues facing the Alliance. Prior to departing and after my return, I had numerous discussions and briefings with Defense and State Department personnel, U.S. civilian experts, and the NATO diplomatic community and parliamentarians.

I am indebted to the work of several civilian experts, Dr. Joseph V. Braddock, Mr. Donald R. Cotter and Dr. Fred Wikner, for their valuable contributions. Dr. Tom Callaghan, a recognized expert on Alliance cooperation, has provided valuable advice. I am also grateful for the advice of Lieutenant General James F. Hollingsworth (Ret.) and Dr. Jeffrey Record, both of whom also assisted with the preparation of the 1977 NATO report.

Finally, I would like to thank the staff that accompanied me on the trip and worked on the report: Mr. Frank Sullivan of the Armed Services Committee and Mr. Arnold Punaro of my staff. Kathy Parkerson of my office deserves much credit for her excellent work in preparing the report for printing.

I am hopeful that this report will be of interest and benefit to the members of our committee as we consider matters relating to the NATO Alliance.

Sincerely,

SAM NUNN.

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NATO: CAN THE ALLIANCE BE SAVED?

The North Atlantic Treaty Organization today faces multiple problems which, if left unresolved, could destroy the Alliance as a credible collective security organization. NATO remains wedded to a military strategy—flexible response and forward defense—whose viability has been severely compromised by profound changes in the global and European military environment. NATO's political cohesion, the essential foundation for needed alterations in the Alliance's military posture, has been badly shaken by external influences and internal disagreements.

The NATO Alliance is now in need of major repair, militarily, politically, and economically. Western political leaders must begin to make these repairs soon if the NATO shield is to continue to protect Western values and interests.

A FRAGILE NATO POLITICAL FOUNDATION

Prospects for achieving desirable alterations in NATO's military force posture and strategy hinge on obtaining a level of political consensus within the Alliance that NATO unfortunately does not enjoy today. Politically, the Alliance is in disarray over a host of issues—a disarray evident in bickering among the allies and in a lack of unified responses to Soviet international behavior. Charges and countercharges are frequently hurled across the Atlantic.

On East-West relations, the Europeans charge the United States with being more interested in confronting the Soviets than keeping peace, and they fear being dragged into war. The United States charges the Europeans with being more interested in economic dealings with the East than the security of their own people, and it fears a European drift to neutralism. The United States contends that a considerable amount of Western European-Soviet bloc trade is significantly subsidized with Western credits and guarantees. The Europeans believe the United States is too sanctimonious and self-serving in efforts to restrict European trade with Eastern Europe while continuing to sell United States grain to Moscow.

On the Middle East, the Europeans charge the United States with seeking a military posture and presence in the Middle East without any overall military goals or political strategy. The United States charges the Europeans with military timidity and inaction in the face of palpable Soviet threats to oil supplies upon which Europe is far more dependent than the United States.

On the Third World, the Europeans charge the United States with overemphasizing military solutions to Third World problems while ignoring the fundamental economic and social problems. The United States charges Europeans with insufficient attention to direct military problems caused by Soviet and Soviet proxy attempts to support the violent overthrow of non-Communist governments in unstable Third World countries.

On burden-sharing, the Europeans charge the United States with neglecting NATO defense during Viet Nam and its aftermath while they were improving NATO defenses and now hammering the allies to do more in difficult economic times. They also criticize the quality of the All-Volunteer Force and question United States abilities to produce reserves in the event of NATO conventional war. The United States charges the Europeans with not accepting a large enough defense spending burden in the face of a large Soviet military buildup.

On the two-way procurement street, Europeans charge the United States with reneging on agreements to procure common equipment and weapons from Europe. The United States charges the Europeans with insufficient interest in NATO standardization and interoperability resulting from national pressures to protect domestic industries.

The disturbing aspect of these charges and counter charges is that both sides are to a growing extent correct. If NATO is to succeed, the discussion must move in the direction of reconciling the real differences and of positive coordination and cooperation.

THE HEART OF NATO'S PROBLEM—A MILITARY STRATEGY THAT CANNOT BE IMPLEMENTED

NATO's military strategy has been characterized as one of flexible response and forward defense. Flexible response has implied the use of tactical and/or strategic nuclear weapons in the event of a Soviet-Warsaw Pact conventional attack in Europe could not be contained by non-nuclear means. Forward defense has meant defense as near to the inter-German border as possible, with the aim of conceding minimum West German territory. This strategy was adopted at a time when NATO possessed pronounced strategic and theater nuclear advantages over the Soviet Union and the Warsaw Pact. NATO's quantitative inferiority in conventional forces deployed in or readily available for combat in Europe was deemed tolerable because nuclear superiority permitted the Alliance to escalate a conflict across the nuclear threshold to the disadvantage of the Pact.

During the past decade and a half, however, the Soviet Union has managed to eliminate NATO's nuclear superiority at both the strategic and theater levels, while at the same time expanding its traditional advantages in conventional forces.

By attaining strategic nuclear parity with the United States, the Soviet Union has severely undermined the credibility of U.S. strategic nuclear forces as a deterrent to a conventional attack on Europe. By deploying theater nuclear forces that are now superior to NATO's, the Soviet Union has reduced the effectiveness of NATO's tactical nuclear forces both as an instrument for defeating a massive non-nuclear invasion and as a deterrent to Soviet use of nuclear weapons. By enhancing its longstanding quantitative superiority over NATO in conventional forces with greatly improved quality, the Soviet Union has diminished the prospects for a successful forward defense.

Under conditions of strategic parity and theater nuclear inferiority, a NATO nuclear response to non-nuclear Soviet aggression in Europe would be a questionable strategy at best, a self-defeating one at worst. Thus major responsibility for continued deterrence in Europe has shifted to NATO's outnumbered, outgunned and maldeployed conventional forces. Flexible response in theory has become inflexible response in practice.

The United States loss of strategic nuclear superiority, which many observers regarded as inevitable, was not in and of itself fatal to NATO's flexible response strategy. Had the demise of strategic superiority been attended by retention of theater nuclear advantages and by creation of conventional defenses unambiguously capable of mounting an effective forward defense of Germany, the basic integrity of NATO's strategy could have been preserved. During the 1970s, however, the Alliance chose to rely for the most part on the aging theater nuclear weapons deployed in the late 1950s and the early 1960s. Despite mounting evidence that the Soviet Union was mustering in Eastern Europe the capacity for a conventional blitzkrieg (thereby reducing the degree of warning time so essential for a successful forward defense), NATO's conventional defense posture vis-a-vis the Soviet-Warsaw Pact was allowed to deteriorate further.

CONVENTIONAL DEFENSE—THE NATO DILEMMA

Thus as NATO enters the 1980s, it confronts a military environment characterized by strategic nuclear parity, growing theater nuclear inferiority, and a continuing lack of a credible conventional capability. Not even the full realization of NATO's Long-Range Theater Nuclear Force modernization program, essential to the re-creation of a credible deterrent to a Soviet first-use of nuclear weapons in Europe, will restore credibility to NATO nuclear deterrence of conventional Soviet aggression.

In 1974, I reported on NATO's conventional and nuclear defense problems and sponsored several amendments designed to stimulate corrective action. In 1977, the late Senator Dewey Bartlett and I questioned NATO's ability to implement its military strategy. An increasing number of Europeans, including some military leaders, are doing so now.

There is a wide agreement in the Alliance that it would be desirable to reduce reliance on nuclear weapons and to strengthen NATO's conventional forces as a means of deterring non-nuclear Soviet aggression in Europe. This slowly emerging consensus runs across the political spectrum—from defense-oriented conservatives to more responsible segments of the anti-nuclear movement. Simultaneously, however, there is a widespread resistance to changing NATO's military strategy because the strategy is politically sensitive and because there is no apparent substitute available. Thus, despite misgivings and growing apprehensions about NATO's existing military strategy, there is a great reluctance on the part of Europeans to rethink it.

One must ask why NATO countries do not use this growing concern as a catalyst for change to build a credible conventional defense. The answer is twofold. First, the conventional force gap between NATO and the Warsaw Pact has been described as so large for so long that a viable conventional defense is believed by many to be hopeless. Second, the cost of matching Warsaw Pact forces one for one—in tanks, troops, artillery and aircraft—is seen as prohibitive, particularly under current economic conditions.

NATO is thus faced with a dilemma: there is a growing consensus that less reliance should be placed on use of nuclear weapons in response to a conventional Warsaw Pact attack, but there is a widespread feeling that a viable non-nuclear defense is not attainable. This paradox, coupled with political and economic differences within the Alliance, is causing frustration in America and is threatening the very fabric of the Alliance itself.

Some have suggested that we simply pull U.S. troops out of Europe in order to punish our NATO allies. As satisfying as this might be as a vehicle for expressing American frustration, it is a recipe for the destruction of NATO and for a neutralized Western Europe. Though some believe these proposals are a means of compelling the Europeans to do more, if implemented, they are likely to do the opposite by strengthening the very political forces in Europe that now oppose NATO. Those who suggest Europe alone has the resources to muster a viable conventional defense—while this has considerable theoretical long-term appeal—should first answer a parallel question: Can an Alliance without American conventional forces be expected to provide a credible conventional defense when the Alliance with American forces thus far has failed?

The principal challenge that President Reagan and his NATO counterparts face at the June Summit Conference is to identify politically sustainable changes that offer the Western Alliance hope for a credible deterrent and a viable defense with available resources in the decade ahead. If this challenge is not met soon, the future of the Alliance itself will be in grave jeopardy.

IS A CREDIBLE CONVENTIONAL DEFENSE POSSIBLE?

Whether Europe is conventionally defensi[illegible]gainst a massive non-nuclear Warsaw Pact attack has for dec[illegible] been a subject of discussion within the Alliance. Today this question has become critical. As the credibility of NATO's strategic and theater nuclear deterrent against conventional attack declines, the importance of a credible conventional deterrent grows. Conventional deterrence depends on a viable conventional defense. Some defense analysts and military leaders now believe that a credible conventional defense is possible through a number of new initiatives. Those suggested initiatives include exploitation of new technologies, adoption of new operational doctrines and better utilization of Europe's substantial reserves of trained manpower for territorial defense.

THE ARMY—AIR FORCE INITIATIVE

One new initiative receiving attention in American military circles is the U.S. Army's work in progress on a new conventional defense doctrine known as "Airland Battle." The "Airland Battle" concept proposes changing the way a conventional defense of Europe would be conducted by using inherent NATO military strengths to exploit fundamental Warsaw Pact weaknesses.

The senior Army commanders, including Chief of Staff Meyer, General Vessey, General Starry, and General Otis, deserve credit for their leadership and innovative work in this area. General Bernard Rogers, NATO Supreme Commander, is beginning to develop some of these concepts for use. General Lew Allen and the senior Air Force leaders of the Air Force Council have reviewed the "Airland Battle" concept and are to be commended for aggressively evaluating the key Air Force role in this doctrine.

According to U.S. Army experts, the essence of this new military doctrine is a more effective and innovative utilization of existing forces and new technologies to exploit vulnerabilities in Soviet doctrine would give emphasis to the attack of all Warsaw Pact echelons. For the first time, this doctrine points to the need to attack the follow-on, reinforcing echelons of the Warsaw Pact forces before they cross the inter-German border and to seize the initiative early through defensive counterattacks against Pact forces on NATO territory.

THE SOVIET-WARSAW PACT ACHILLES HEEL?

The success of a massive Soviet blitzkrieg against Europe would be critically dependent upon maintaining the momentum of the "high tempo" of advance called for in Soviet theater doctrine in the face of potentially heavy losses. The Soviet buildup itself has been crafted to further this Kremlin military tactic of attacking in wave after wave after wave of powerful forces designed to break through NATO's forward defenses at points of Soviet choosing. Soviet military strategy essentially seeks to play offense in a football game with Soviet rules, so that many fullbacks can charge the defensive line one after another over the same position on the premise that sooner or later some fullbacks will get through. In effect, the Soviets intend to "pile on" successive echelons of forces, at a rate that permits rapid replacement of losses and insures a swift victory by keeping defending NATO forces continually off balance. Soviet success is clearly contingent on the arrival intact, and at the right time and place, of these Soviet echelons. NATO must change the rules of the game to prevent this possibility.

According to a recent U.S. Army Training and Doctrine Command analysis:

> The Armies of the Warsaw Pact are one of the largest and most powerful in history. They may also be one of the most cumbersome. The Warsaw Pact organizes, plans, and trains to conduct its version of the blitzkrieg. Against this, a linear defensive doctrine which is designed to prevent breakthrough by means of battles of attrition against a vastly superior force and ignores the operational goals is militarily unsound.

The proposed new "Airland Battle" doctrine assumes that Soviet conventional military posture and doctrine has significant inherent weaknesses, if NATO can exploit them. If NATO succeeds in isolating the attacking first echelon from the reinforcing echelons—through attacks on the latter—the momentum of the invasion would be destroyed, and, with it, any reasonable prospect of an irreparable and strategically decisive Soviet penetration of Western Europe.

It is this Soviet momentum that the new Army doctrine seeks to halt by destroying or disrupting follow-on Soviet echelons before they reach NATO territory, and by launching early counterattacks against isolated first echelon forces inside Western Europe. This is a dramatic departure from the comparative passivity of NATO's present Maginot-minded forward defense.

NEW TECHNOLOGY AND NEW DOCTRINE—NATO OPPORTUNITY

Not only the U.S. Army, but other knowledgeable experts believe that this new echelon-targeting doctrine, if adopted and implemented by the Alliance, has the potential to enhance conventional deterrence, raise the nuclear threshold, and put a new meaning into the strategy of forward defense. The doctrine capitalizes on three major advances in conventional weapons technology which have already taken place:

(1) The substantially improved lethality of conventional weapons carrying improved munitions that can be delivered from existing platforms;

(2) The great potential of micro-electronics to enhance the front-line units' ability quickly to collect, handle, distribute, and act on information about the enemy; and

(3) Improvements in the ability to quickly move and target large amounts of improved conventional firepower against enemy force concentrations.

It is neither possible nor necessary to match Soviet ground and tactical air forces on a one-for-one basis. The political and fiscal impossibility of attempting to compete with the Warsaw Pact numerically was vividly demonstrated in the 1952 Lisbon Conference. That NATO Summit recommended 96 divisions and 9,000 airplanes for the conventional defense of Western Europe. This recommendation was unacceptable to member nations then and remains so today given current NATO central region force levels of 26 divisions and 1,800 combat airplanes.

Instead, NATO needs to procure conventional weapons that can be delivered by existing aircraft and surface-to-surface rockets accurately against fixed and mobile forces. Long-range conventional weapons are being developed that, because of their greatly improved accuracy, now begin to approach the destructive potential of small yield (2 to 3 kt) battlefield nuclear weapons. Experts such as Dr. Joseph Braddock, Mr. Donald R. Cotter and Dr. Fred Wikner have conducted an impressive evaluation of the potential for improving conventional forward defense with these weapons. Some examples of such systems are the conventional-standoff weapon, the Corps support weapon system, and conventional anti-airfield missiles. According to these experts, these new conventional weapon systems can singly destroy 60 percent or more of an entire company of tanks or motorized infantry per aircraft sortie or missile fired.

CAN NEW DOCTRINE CHANGE OLD PROCUREMENT HABITS?

If this new doctrine is adopted, a major unresolved issue is how the political and military leaders of each NATO country can get the procurement bureaucracies of their respective defense departments to purchase the appropriate weapons for their individual ground and air forces. With limited budgets this task will not be easy. Military institutions, traditional and conservative by nature, will adopt these weapons only with the most careful and intelligent encouragement. They may be reluctant to trade off even a small part of their proposed new acquisitions (tanks, planes, etc.) in return for much more capable weapons and munitions as well as targeting and surveillance systems. The U.S. Army believes that certain parts of the "Airland Battle" doctrine can be adopted without major changes in force structure and equipment, and that these partial changes would lead to a significant improvement in NATO's ability to contain a Warsaw Pact breakthrough and to inflict higher losses on attacking forces. Budget reality will require, however, that there be some trade-offs between traditional platforms (such as tanks and aircraft) and advanced weapons, if this theory is to be fully implemented.

A COMPATIBLE EUROPEAN IDEA

As the U.S. Army moves toward a conventional defense based on "fire and maneuver" and early attacks on the enemy's rear echelons, some Europeans are discussing a defense in depth based upon re-equipped and expanded reserves and territorial forces. Europe has large reservoirs of trained manpower not organized into standing reserve units. If organized into units and properly equipped, such forces could become a threat to Soviet ability to hold any territory they might initially be able to capture.

The U.S. Army's concept is aimed at early containment of a Soviet breakthrough by attacking their rear echelons before they can cross the border. A compatible idea, now gaining ground in European military circles, is to focus on attacking those Soviet units that have already crossed. Both concepts have merit, particularly if applied simultaneously and in a coordinated fashion. These are new concepts, however, and there is far from a consensus in NATO. German and British Army leaders have indicated interest in these new concepts, but as yet they have not received the attention of the top NATO political leadership that they deserve.

THE BALL IS IN THE COURT OF THE POLITICAL LEADERS

For years political leaders who support NATO have despaired at the inability of NATO's military leaders to outline a conventional doctrine that appears achievable within politically available resources.

For the first time NATO's military leadership is beginning to outline this very possibility. Unfortunately, NATO's political leadership seems to be in a trance. While there may be problems in these proposals, the potential payoff demands they be given immediate top level study. NATO countries must not allow the possibility of a real conventional defense and deterrence to pass by without serious and immediate consideration.

IS A CREDIBLE CONVENTIONAL DEFENSE AFFORDABLE?

It seems clear that NATO defense budgets cannot be reduced if we are even to preserve current defense capabilities. It also seems clear that few NATO members are likely to increase their defense budgets substantially as long as the present political and economic climate within the Alliance prevails. On the other hand, substantial increases beyond those NATO has already agreed on may not be necessary if the Alliance is prepared to undertake fundamental changes in its force posture, its doctrine, and its procurement practices.

NATO countries have committed themselves to 3 percent annual real growth in defense spending with varying degrees of success in meeting these goals. Recently, General Rogers told NATO Defense Ministers that "attaining an adequate conventional capability is feasible at levels of national defense expenditure which are not as great as most imagine." General Rogers has made force proposals for 1983 to 1988 which he says "would require an annual real increase in defense spending of 4 percent Alliance-wide."

These proposals lay a foundation for a new NATO force posture and conventional doctrine. Admittedly they represent only the first steps toward implementing the new strategic concepts that are required, but they are bold proposals indeed, considering NATO's historic tendency to cling to the status quo. Many of the new efforts do not require additional money, but instead focus on reorganization and revitalized strategic and tactical doctrine. The primary cost of such changes would be in shattered preconceptions and broken traditions.

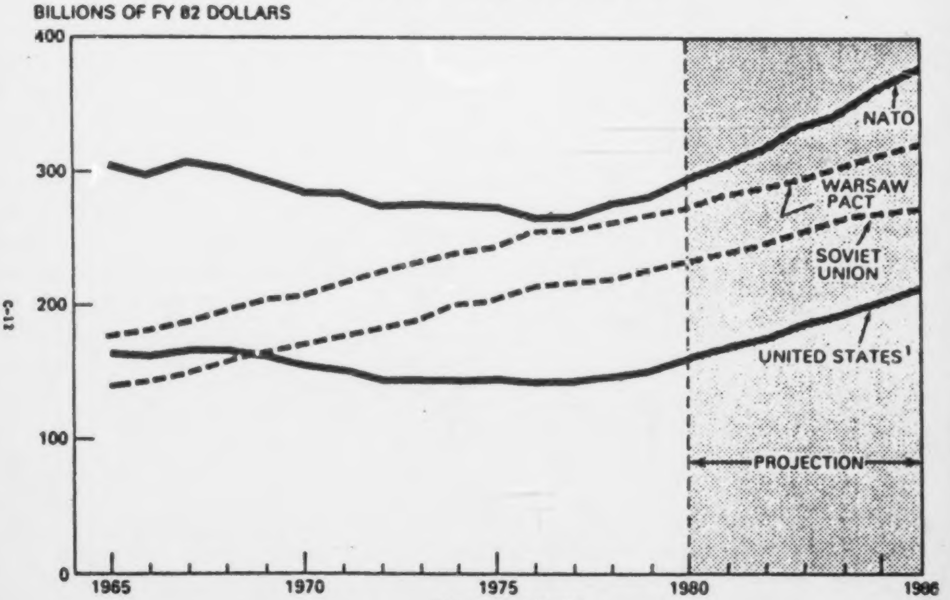
Last year, NATO was close to meeting the spending goal outlined by General Rogers. It would be tragic if NATO political leaders continue to ignore the hope of a renewed and real conventional deterrent.

INTEGRATION AND INTEROPERABILITY ARE INDISPENSABLE

NATO integration and interoperability are the keys to implementing any new doctrine successfully in Central Europe as the following Department of Defense chart demonstrates.

CHART C-12

COMPARISON OF NATO AND WARSAW PACT TOTAL DEFENSE COSTS



¹SOUTHEAST ASIA INCREMENT EXCLUDED (I.E., VIETNAM COSTS)

NOTE.—From the Department of Defense Annual Report fiscal year 1982.

This chart clearly shows that the United States and its NATO Allies spend more for defense than the Kremlin and its Warsaw Pact Allies. These figures include the funds for all U.S. forces and all Soviet forces, including those along the Chinese border and in Afghanistan.

NATO-WARSAW PACT MILITARY BALANCE—WHERE DOES THE MONEY GO?

A recent DOD assessment provided in the Senate Foreign Relations Committee NATO Report gives the Warsaw Pact a "2 to 1 advantage across the entire central front," when comparing "total firepower capability." NATO has just released a comprehensive comparison of the NATO-Pact balance which documents the large Warsaw Pact numerical advantages in combat power.

The taxpayers in every NATO country should question why the Warsaw Pact is credited with substantially more conventional military capability than NATO when NATO spends more money. Some of the answer lies in the Pact's comparatively low military manpower costs, but a large part of the combat imbalance lies in the Pact's greater degree of force integration and commonality in weaponry and tactics.

The present NATO armaments system functions as little more than a loosely organized collection of national defense efforts, backed by fragmented and highly inefficient national procurement systems. The North Atlantic democracies possess more than half again as many people as the Warsaw Pact countries and more than twice the gross national product of the Warsaw Pact countries. In spite of these advantages, the loosely organized NATO defense efforts produce a collection of forces that are quantitatively inferior, qualitatively uneven, and have only a limited ability to rearm, repair, reinforce, support, supply or even communicate with one another. No less disturbing are the wide disparities in national ammunition stockpiles which call into question NATO's ability to sustain combat beyond the first weeks of hostilities. The U.S. Senate has passed a resolution introduced by Senator Roth, Senator Glenn and myself suggesting ways to improve Alliance cooperation in this area.

THE U.S. EXAMPLE

In our own Department of Defense, there is today no high level person working full time on these important Alliance cooperation issues. It is not until you reach down in the bureaurracy to the Deputy Assistant Secretary of Defense for NATO Affairs level that anyone is identified for this focus. This position has been vacant for over a year.

THE U.S. ARMY CANNOT MARCH ALONE

A common military doctrine and operational tactics for all NATO forces are a prerequisite to any credible conventional defense. There is no point in the U.S. Army adopting a new posture if the Allies on our Army's flanks continue to adhere to traditional NATO doctrines. Furthermore, to implement this new doctrine, the integration of air support with ground action is even more necessary than before. Integration and interoperability can produce quantum jumps in military effectiveness, but this type cooperation continues to elude NATO leadership. National military traditions and inter-service customs have for years sapped NATO's resources and strength.

THE SACRED COWS

This new conventional doctrine may offer the possibility of real conventional defense within affordable defense budgets, but a revitalized political and military leadership will be required to implement it successfully. The top political and military leaders of Europe and the United States will have to take conventional defense seriously and support the appropriate improvements fully—even at the cost of some national traditions and inter-service customs. If this is a price that NATO nations refuse to pay, it is doubtful that the people of the United States or Europe will continue to support the current NATO posture for very much longer.

GROWING NUCLEAR CONTROVERSY

Within the past few years, NATO's nuclear posture has become a focus of growing public controversy. Actual NATO deployment of Pershing-II ballistic missiles and ground-launched cruise missiles in Europe, absent an arms control agreement with the Soviets, is given no better than a 50–50 chance of success by many knowledgeable Europeans. 1981 and 1982 have witnessed major public demonstrations in Europe against the deployment of modern nuclear missiles. President Reagan's call for the "zero option"—no long-range theater missiles on either side—temporarily stilled the voices of the European anti-nuclear movement, but now a nuclear freeze movement has gained considerable attention in the United States. The administration opposes a nuclear freeze at current levels on the grounds that it would "perpetuate an unstable and unequal military balance."

THE BUNDY/KENNAN/MC NAMARA/SMITH PROPOSAL

Four former U.S. policymakers—McGeorge Bundy, George F. Kennan, Robert S. McNamara, and Gerard Smith—have called for a "no-first-use policy" to be adopted by NATO. This would limit NATO's use of nuclear weapons to retaliation for Soviet first use; it would ban NATO first use, even in the event of a collapse of NATO's conventional defenses. Secretary of State Haig has publicly expressed administration opposition to this policy on the grounds that it would make "Europe safe for conventional aggression" in the absence of the United States taking steps to "reintroduce the draft, triple the size of its Armed Forces, and put its economy on a wartime footing."

The growing clamor and controversy surrounding nuclear weapons represents a volatile political situation. The political leadership of the United States and the NATO allies must assert vigorous leadership in presenting their constituents with the real choices and trade-offs regarding NATO's nuclear weapons policy. The challenge for NATO's political leaders is to channel the growing concerns and fears into positive support for constructive changes to NATO's conventional and nuclear policies which can significantly raise the nuclear threshold.

IS "NO FIRST USE" A RESPONSIBLE NATO POSTURE?

NATO conventional force strategy is based on the possible first use of nuclear weapons. NATO's conventional warfighting tactics, like those of the Soviet Army, reflect the presence and possible use of nuclear weapons on the battlefield. In the pre-nuclear era, concentration of ground forces on the battlefield was common practice to achieve a decisive breakthrough of a defender's line.

In the presence of nuclear weapons, however, prolonged concentrations of conventional forces are potentially fatal because massed forces present lucrative targets that are easily destroyed by nuclear weapons. Thus conventional tactics against a nuclear armed opponent place a premium on keeping ground forces dispersed.

In this regard, NATO's deployment of varied battlefield and theater weapons in Europe and NATO's first use doctrine denies to attacking Soviet conventional forces the ability to mass their tank armies for long periods. Because of this nuclear influence on conventional warfare tactics, a NATO "no first use policy" standing alone would allow a Soviet concentration of forces and would undermine NATO's conventional defenses. The Alliance must carefully consider the effect of its theater nuclear policy on Soviet conventional capabilities before any major changes are made in NATO's theater nuclear doctrine and deployment.

MAJOR CHANGES IN NUCLEAR POSTURE NEEDED

NATO's nuclear force posture, especially its heavy reliance on short-range battlefield systems, requires significant reform. NATO's nuclear forces include many weapons that are too short in range and are not survivable. In the early stages of a war in Central Europe, NATO would be placed in an unacceptable position of "using or losing" its short-range battlefield systems. If the weapons are moved to the rear, NATO would then confront the dilemma of employing nuclear weapons whose range restricts them to use on NATO territory, thus destroying the land we are sworn to protect. The security of these weapons and their warheads is a big problem and detracts from conventional force capabilities by requiring substantial manpower for management, maintenance, and security. Given this situation, many who have studied NATO's nuclear posture for years wonder why the anti-nuclear movement is protesting against the proposed NATO long-range nuclear weapons rather than against the battlefield systems that represent the status quo.

THE CONVENTIONAL HORSE MUST BE IN FRONT OF THE NUCLEAR CART

I differ with Messrs. Bundy, Kennan, McNamara, and Smith in that I believe that a viable conventional defense, together with mutual arms control guarantees, should be pre-conditions to any move toward a no first use policy. Simply declaring a no first use policy in the hope of stimulating greater investment in conventional defense will not suffice. The conventional horse must be in front of the nuclear cart.

If NATO is willing to dedicate itself to creating a credible conventional defense, it can also undertake other measures that would significantly reduce the likelihood of nuclear war in Europe. A viable new NATO conventional capability would:

(1) Provide a rational basis for a radical transformation in NATO's present nuclear force posture and a negotiated withdrawal from Europe of several thousand of the battlefield nuclear warheads now deployed there;

(2) Permit modernization of NATO's nuclear forces at much lower levels of nuclear weapons than exist today. Some additional medium- and long-range nuclear weapons for deterrence, such as nuclear-armed submarine-launched cruise missiles deployed on our attack submarines, should be considered for NATO's long-term deterrent posture;

(3) Put conventional defense and deterrence on a far firmer footing and focus our nuclear policy on the deterrence of any Soviet use of nuclear weapons; and

(4) Provide one of the necessary pre-conditions to serious NATO consideration of a policy of "no first use" of nuclear weapons.

RECOMMENDATIONS

The NATO Alliance has weathered many military and political storms in the three decades of successful deterrence of Soviet aggression in Central Europe. The accumulative effect of these storms, however, coupled with changes in the military balance of power, have greatly weakened the NATO shield of Western values and interests.

NATO is at a critical juncture. It can continue doing business as usual by clinging to the status quo. This will inevitably lead to reduced NATO credibility and a deterioration of the Alliance.

There is another available path. NATO should commit itself to achieving a viable conventional defense, a revised nuclear posture and a series of bold and innovative arms control propoals that would make possible a significant reduction of battlefield nuclear weapons in Europe.

It is apparent that President Reagan and his NATO counterparts will have much to discuss in the June NATO Summit. Strong American and European leadership—pulling together—will be required to make a realistic conventional defense of Europe possible and to move away from NATO's excessive reliance on early use of nuclear weapons.

If these goals are to become realities, I recommend the following:

I. President Reagan should be prepared to offer a proposal at the June NATO Summit that will challenge the Alliance to dedicate its maximum effort to building a credible conventional defense and an improved and more sensible nuclear deterrent.

President Reagan should challenge our Department of Defense to be prepared to present to NATO a plan for a coherent military strategy for the security of NATO, together with a reallocation of roles, missions, forces and resources to implement it. Much of this information is already available through existing comprehensive defense studies but simply has not been focused on by most top military and civilian leaders. Our Department of Defense should answer the following questions for President Reagan before he meets with his NATO counterparts:

A. How can NATO military doctrine be changed to substantially improve the chances of successful conventional defense?

B. Is the "Airland Battle" concept official Department of Defense doctrine? If so:

1. Has this new doctrine been proposed by the United States to NATO?
2. How can NATO forces be operationally integrated to implement this doctrine?
3. What programmatic changes are necessary to underwrite this capability?
4. What conventional programs and weapons are in the current budgets and five-year plan to enhance the disruption and destruction of Soviet follow-on echelons?
5. What new weapons or systems are available for this purpose which are not in the current budgets or five-year plan?

C. What opportunities exist to improve NATO conventional defense through improved use of European manpower reserves, organized and equipped for territorial defense?

D. If a viable conventional defense is achieved, how should NATO theater nuclear forces be redesigned and modernized to:

1. Better deter Soviet first use of nuclear weapons;
2. Enhance conventional defense; and
3. Provide options for major negotiated withdrawal of nuclear weapons from Europe?

II. Once firmly embarked on the implementation of a viable conventional defense, NATO can:

A. Propose a mutual U.S./U.S.S.R. negotiated withdrawal of several thousand battlefield nuclear weapons from Central Europe.

B. Seriously consider two joint and mutually dependent NATO-Warsaw Pact arms control pledges of:

1. No first use of nuclear weapons; and
2. No large concentrations of conventional ground forces, with special emphasis on armor forces, within a specified distance of the inter-German border: (a) A breach of the "conventional concentration pledge" would render null and void the no first use pledge; (b) The effective date of any such arms control proposal must be geared to the implementation of a viable NATO conventional defense; and (c) Any such arms control agreement must be verifiable.

III. Until the Alliance agrees on a new doctrine and dedicates itself to its implementation, President Reagan should instruct the Secretary of Defense to permit no net increase in the present number of U.S. troops deployed in Europe.

The President should also ask the Secretary of Defense to examine the five-year defense plan, and beginning in fiscal year 1984, to isolate the expenditures designed directly for NATO improvements and freeze those expenditures which exceed our NATO 3-percent commitment until the NATO political leaders have a clear agreement on a military strategy for the decade of the eighties.

IV. NATO leaders should agree to put their full weight behind renewed and vigorous efforts—including new or revised high level NATO and Defense Department groups if necessary—to accomplish the following objectives within specified deadlines:

A. Establish a cooperative defense-industrial effort within Europe and between Europe and North America;

B. Develop options for specialization and division of labor within the Alliance to share, equitably and efficiently, the financial burden as well as the economic benefits of NATO defense;

C. Promote increased integration and interoperability of NATO forces;

D. Identify weapon systems which can be standardized at an early stage of R. & D. and procurement; and

E. Monitor each NATO nation's defense budget at every stage of the budget process, providing information to NATO governments as to compliance with two-way street and standardization agreements.

V. NATO should agree to use Western financial leverage, such as credits and taxes, to influence Soviet behavior, while sharing the burden among NATO's members.

A standing group in NATO whose primary function would be to monitor all Western credits to the Soviet Union and the Warsaw Pact and keep the leaders informed of current developments and long-range trends could be a first step. This group would also be responsible for suggesting options on a continuing basis for reduction or suspension of these credits and other financial measures, in response to NATO collective decisions.

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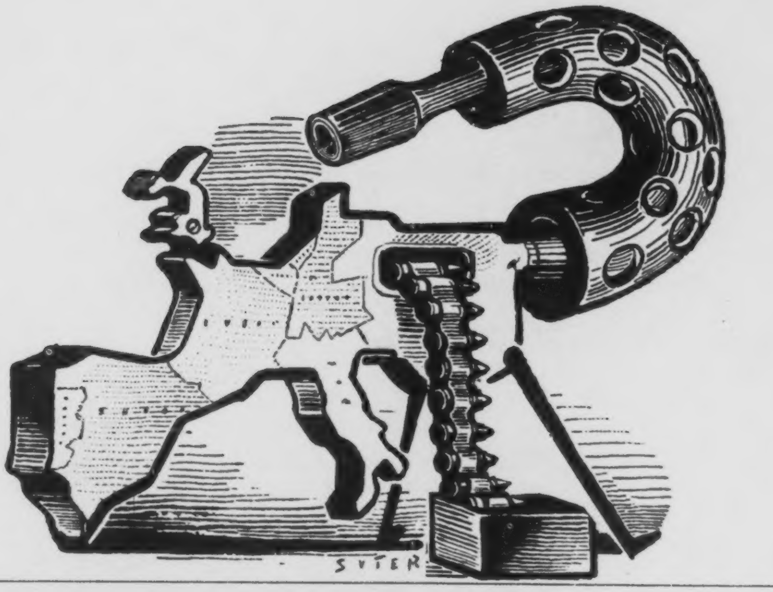

David Suter

ENDING THE AMERICAN PROTECTORATE OF EUROPE

Why we should dissolve NATO and bring home our troops.

by Ronald Steel

FOR NEARLY thirty-five years the alliance with western Europe has been the cornerstone of American foreign policy. It formally joins us to societies with which we share a cultural heritage, a political tradition, and an economic network. Even without the military framework of NATO, we would be very close to the nations of western Europe. But the military link is what gives the relationship a unique meaning.

Yet the striking deterioration of the American economy, the enormous cost of global military commitments, and the mounting dangers of our present nuclear strategy all require us to reexamine our system of alliances, especially our military relationship with western Europe.

That relationship grew out of very special circumstances. The terrible destruction of Europe's last civil war brought about the collapse of the great European empires: France, Britain, and Germany. Russia alone emerged as a major European power, gravely wounded by the war, but intent on carving a sphere of influence in the states that the West had set up a generation earlier as a *cordon sanitaire* against Bolshevism. Between 1945 and 1948, though, that sphere of influence was transformed—through a process of events historians have argued about ever since—into a satellite empire.

The Atlantic alliance was created primarily in response to the Soviet Union's assertion of control over eastern Europe. There were good reasons for apprehension that the Russians, perhaps in conjunction with European communist parties, might try to expand their empire westward through force or subversion. The governments of western Europe seemed weak and demoralized. They looked to the United States for help—both economic help, in the form of dollar infusions, and military help, in the form of defense promises.

American officials were eager to respond. Caught up in the flush of the great victory over Germany and Japan, exhilarated by a sense of

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mission that had been frustrated since the disappointments following World War I, and seeing themselves as the protectors and even inheritors of Europe, American leaders eagerly embraced their new self-assigned responsibilities.

At the heart of the postwar stratagems was the problem of Germany. Defeated, occupied by armies that were quickly changing from allies to rivals, Germany was a prize of incalculable value in what was perceived to be the emerging struggle for Europe. Neither the Americans nor the Russians could allow this prize to fall into the hands of the other. The struggle for Germany became central to the struggle for Europe. The Americans created a West German state from the western occupation zones, and the Russians built a state of their own in the east. Those states became incorporated into their rival alliances. They still are. The alliances subsequently came not only to reflect the division of Europe but to sustain it.

The United States offered protection to West Germany and its neighbors at a time when those nations were very weak. The purpose of the alliance, as described to Congress at the time by Secretary of State Dean Acheson, was to provide a shield behind which the Europeans—temporarily relieved of the burden of creating a strong defense force—would be able to rebuild their economies. To provide psychological support during this period of dependency, and to relieve the Europeans of the need to divert resources from recovery to weapons, the United States agreed to maintain a large number of soldiers in western Europe.

It was never anticipated—at least by the Senate that ratified the North Atlantic treaty in 1949—that an American army would remain in western Europe for decades. Indeed, Acheson specifically reassured a concerned Sen. Robert Taft that the Truman administration had no such intentions. Perhaps he meant it. But events, as well as opportunities, have a way of overtaking intentions. The United States has not only remained in Europe far longer than the founders of the alliance anticipated, but has transformed a temporary protectorship into an immutable principle of its foreign policy.

THERE may be persuasive reasons for this principle, but in assessing them, it is worth keeping the original purposes of NATO in mind. Only then will we be able to distinguish between a habit and a need, and to determine whether an alliance formed under very different circumstances remains a valid expression of American interests today.

Certainly, conditions have changed dramatically since the formation of NATO. The war-weakened nations of western Europe have not only restored their economies, but some have attained for their citizens standards of living higher than our own. The United States, by the same token, no longer enjoys the enormous trade surpluses of the early postwar years. Indeed, those surpluses have turned into massive balance-of-payments deficits.

Where the problem was once to spend as many dollars as possible to stimulate the world economy, more recently it has been to prevent the international economic system from foundering in a flood of paper dollars churned out by a profligate Treasury. Thus on an economic level the alliance has been completely transformed, and the imbalance of resources that originally inspired it no longer exists. Indeed, in some respects the Europeans are better able to pay the costs of defense than are the Americans.

At the military level, the situation is also very different. The United States made its pledge to defend western Europe at a time when it enjoyed vast nuclear superiority over the Soviet Union. The pledge was persuasive because it seemed to involve relatively few risks. We could assure the Soviets of destruction of their society should they attack western Europe, without ourselves suffering retaliation in kind. A deterrent so one-sided seemed virtually foolproof and cost-free.

That situation, it hardly seems necessary to underline, no longer exists. Today we are in a position of rough nuclear parity with the Soviet Union. Each nation has the power to destroy the other. A war fought at such a level of destruction is truly beyond rational objective. But such a war is very possible, and indeed becoming increasingly likely as nuclear arsenals continue to grow and military planners abandon the deceptively reassuring theories of deterrence for so-called "limited" nuclear options—in other words, nuclear war.

This change of conditions transforms the nature of the American guarantee to western Europe. Europeans have legitimate reason to question whether any American president would deliberately risk the nuclear devastation of the United States in response to, let us say, a Soviet move across the East German frontier, or perhaps an outbreak of fighting between the two Germanys. To assuage European anxieties over the credibility of "massive retaliation," American strategists in the Kennedy administration two decades ago posited a theory they called "flexible response." They installed smaller tactical or "battlefield" nuclear weapons in Europe, both to reassure the Europeans about nuclear deterrence and to compensate for the fact that the Soviets had a bigger army than the west Europeans were willing to assemble.

But the new strategy did not allay European fears. The so-called battlefield nuclear weapons—many thousands of which have been deployed in western Europe, with thousands more to come under the Reagan administration's plan—are more powerful than the bombs that destroyed Hiroshima and Nagasaki. "Flexible response" is no more satisfactory an answer for Europe than "massive retaliation" was. Under either doctrine Europe might become a nuclear battlefield, and the decision was not in European hands. As General de Gaulle said in 1963, "No one in America can say if, where, how, or to what extent American nuclear weapons would be employed to defend Europe." What was true then is no less true today.

The current debate over the first use of so-called battlefield nuclear weapons on the Continent dramatizes long-standing European anxieties and the inherent conflict between American and European interests. For the most part the NATO allies, and particularly the Germans, are opposed to renouncing first use. This may seem an anomaly. If such weapons were ever used, they would utterly destroy Germany, and probably most of western Europe as well. The simple laws of survival would seem to dictate that all nations pledge not to be the first to use such weapons.

But Europeans understandably do not want to think that nuclear weapons might be used, any more than Americans do, or for that matter Russians. They prefer to focus on deterrence: that is, to believe that the mere threat to use atomic weapons will dissuade the Russians from launching any kind of war, nuclear or conventional. In addition, if the West were to renounce first use, the Europeans would have to build a conventional army capable of balancing that of the Russians. They could certainly do this, for they have both the manpower and the means. The population of western Europe is larger than that of the Warsaw Pact countries, including the Soviet Union, and its wealth is far greater.

But the Europeans do not want to spend the money that would be involved. It would mean diverting resources from the civilian economy to the military. It would mean higher taxes, a lessened ability to compete in world markets, and a somewhat lower standard of living. Naturally, politicians are loath to ask such sacrifices of voters. This would not bring them popularity or win them elections. They would prefer, quite reasonably, to cross their fingers, hope for the best, and rely on the terrible, though intangible, threat of deterrence and on American protection.

This is the main reason why they insist that the United States keep an army on the Continent. They do not want to fill the gap themselves, which they would have to do if the Americans left, and they want to keep the American nuclear guarantee credible. If enough GIs are there, the Europeans reason, the United States will immediately be drawn into any European war. The GIs are, in other words, hostages to NATO's nuclear strategy. This is what they have always been. This is why their presence is sacrosanct to the Europeans.

WHY so many GIs? Why 350,000, plus an equal number of dependents, as there are today? No special reason other than that they are already there, and any effort to withdraw them would have a symbolic significance. If there were, say, a million American soldiers in western Europe, that would be the magic figure, and anything less would be considered folly. The point is that there is no correct number. It is mostly symbolic: a symbol of commitment. Withdrawal could signal that the United States might not automatically and immediately be drawn into a war on the Continent.

A strategy designed to assuage the Europeans' feelings and provide a rationale for their military dependence also holds great dangers for them. It means they are basing their defense on weapons that will destroy them if ever used. Yet the decision on their use is outside their control. This is a problem inherent in the structure of NATO. For the most part, they have tried to evade the problem by pretending it does not exist. They have been encouraged in this effort by American officials, resistant to a more self-reliant Europe responsible for its own defense and diplomacy.

Only General de Gaulle two decades ago had the temerity to point out that the emperor had no clothes. Only the French listened to him, and as a result, France today has an independent military force, including its own deterrent, and an independent foreign policy. By offering the means for Europe to become responsible for its defense, de Gaulle was pursuing the original intentions of NATO. This infuriated American officials, particularly during the Kennedy administration, for by then they had come to enjoy their protectorate over Europe. They did not want to lose it, despite the costs and risks it involved.

Ironically, France is considered the most responsible American ally in Europe today. De Gaulle, though he was pilloried by American officials in his time, understood that self-reliance breeds respect. If he had lived long enough, he would have seen his analysis respected by those who denigrated him.

The passing of de Gaulle, and his failure to achieve his vision of a Europe "from the Atlantic to the Urals," pushed the problem of Europe off the American foreign policy agenda, but it did nothing to resolve the problem. The current strategy of reliance on front-line "battlefield" nuclear weapons poses great dangers for the United States as well as for Europe. It means that the outbreak of hostilities on the central front, however it may be initiated, could rapidly degenerate, through a series of steps which no one could accurately foresee or guard against, into a full-scale nuclear war that would destroy the United States as a nation. Never before has an alliance involved such risks. When the United States came to the aid of the European democracies in 1917 and 1941 it risked something, but never its survival. Atomic weapons have raised the stakes of alliances without having changed their terms.

To be sure, it must be a supreme objective of American diplomacy to prevent western Europe from falling into Soviet hands. It is an even greater European objective. But the methods best designed to achieve such an objective are not self-evident. Some involve terrible costs and risks, and others, fewer. Deterrence is not a science. It is a hope and at best a gamble. Much of it is merely wishful thinking and even self-deception. No one knows what would happen if nuclear weapons were ever used in battle. No one knows whether a "limited" nuclear war could ever be stopped before all the participants were destroyed. That is why it is an American interest to avoid being the first to use nuclear weapons, whether in Europe or anywhere else.

The problem is to get the Europeans to understand this. For very good reasons they resist doing so. They do not want to pay for larger conventional forces, even though they could if they wanted to. They prefer to rely on a strategy that, however dangerous and even irrational, has worked so far. This in itself becomes a reason for continuing the game—a game sometimes compared to chess, but more like Russian roulette.

If the Europeans do not want to make this effort, they must be helped. But here we confront a further anomaly. American officials do not want to help them. They do not want to reduce Europe's reliance on nuclear weapons—indeed they are insisting that the Europeans accept thousands more such weapons on their soil, including long-range weapons capable of striking the Soviet Union directly. Nor do they want to decrease the American military presence on the Continent.

Why not? Because the troops and the nuclear dependence seem to offer some leverage over the Europeans. If the NATO allies built a larger conventional army and assumed the full cost of their own defense, they would demand responsibility for it. There is no reason for them to take on the costs without gaining the benefits. Yet this would mean the United States would lose some degree of control over its allies, just as it lost control over France when de Gaulle pulled his military units out of NATO.

THE ISSUE is control. But how much does "control" mean? In the past it meant a lot. In economic matters, the Europeans were supportive to the point of compliance. Throughout the 1960s they accepted an ever-mounting pile of paper dollars as though they were based on a solid, stable currency. In so doing, they helped to finance both the Vietnam war and the Great Society. But this system collapsed in the early 1970s under the sheer weight of inflation-weakened dollars, and with it went most of the advantages of what the Europeans called U.S. "dollar hegemony."

Political hegemony, for its part, has never lived up to its billing. The Europeans have followed the American lead when it suited them, and stayed on the sidelines when it did not—as in the Korean and Vietnam wars, and our recent peace efforts in the Middle East. Though Europeans may be militarily dependent on the United States, most of them go their own way on such issues as Central America, trade with the Soviet bloc, Afghanistan, Poland, and the Arab-Israeli quarrel. They may or may not be right in their judgments. But "hegemony" should have more tangible rewards—considering that in fiscal 1981 the estimated cost of U.S. forces devoted directly or indirectly to the defense of western Europe was $81 billion. Removing and decommissioning six of the present ten U.S. divisions assigned to NATO would result in an estimated annual saving of $30 billion.

The real benefits of the NATO alliance, it would seem, are not economic or political but psychological. American officials are accustomed to thinking globally. They like to speak for, as well as to, western Europe, to define America's greatness in terms of its ability to orchestrate a global network of alliances, protectorates, and dependencies. Any lessening of that control seems to involve a reduction of status and power. This is particularly difficult for an administration obsessed with military power, which is now intent on recapturing an absolute military superiority over the Soviets as the means to implement its diplomacy.

Such a goal was far more feasible in the past than it is today—a fact that makes so much of the Reaganite policy, both foreign and domestic, seem an exercise in nostalgia. America's share of world production has declined from 50 percent in 1945 to only 20 percent today—and, if current trends continue, will decline to only 10 percent by the end of this decade. Yet the administration is pursuing a foreign policy based on conditions of the late 1940s, when the U.S. held a virtual monopoly on wealth and on military power.

That outdated policy has been hard to change, since its force rests more on psychology than statistics. Only the Reagan budget, with its enormous increases for the military at the expense of social programs and the living standard of most Americans, has brought home the true cost of trying to maintain a dated relationship with our allies and a policy of military engagement throughout the third world.

The time has come to draw to a close a historically necessary, but now outdated and undesirable, military relationship with Europe. The United States no longer has the means to be the defender of Europe and to quell social discontent in the entire noncommunist world. Nor are the advantages of trying to do so self-evident. Our own society is suffering the effects of a bloated and self-aggrandizing foreign policy that is sacrificing the welfare of the American people to grandiose and unrealizable foreign objectives. The purpose of NATO, it is well to recall, was not that the United States should maintain a permanent protectorate over Europe, but that it should temporarily stand guard while the Europeans restored their economies and developed the means to defend themselves.

Shortly after leaving office, Dwight Eisenhower said: "For eight years in the White House I believed that a reduction of American strength in Europe should be initiated as soon as the European economies were restored. I believe the time has now come for withdrawing some of those troops." That was twenty years ago.

For a long time it was both self-flattering and useful to be the generous protector of a defenseless Europe. But the baby in swaddling clothes is now a 200-pound adolescent, and the United States no longer has the economic surplus to do for others what for a long time they have been capable of doing for themselves. □

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COMMITTEE PRINT

NATO TODAY: THE ALLIANCE IN EVOLUTION

A REPORT

TO THE

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UNITED STATES SENATE

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SUMMARY AND CONCLUSIONS

Overview in the Historical Context

1. There is greater strength and commonality of purpose in NATO today than most political commentators believe. NATO has survived for 33 years despite many policy differences because partners have been bound by common values and a common desire to unite in defense against a possible military attack by the Warsaw Pact forces. A large majority of West Europeans and all NATO governments still share this common desire. Recognizing the political and economic limitations facing West European governments, they have made some progress in three areas considered particularly important to American observers: NATO burden sharing, sanctions against the Soviets, and out of area problems.

2. NATO is not in a new and deep crisis that will inevitably lead to the Alliance's demise. Rather, NATO has faced almost continuous controversy since its birth. At least four of the previous NATO controversies have presented more serious cause for alarm than any single disagreement dividing the Allies today. The four include previous arguments over the European Defense Community (1950–54), American anger over the Suez invasion of 1956, the French withdrawal from NATO's military wing in 1966, and European concern over U.S. involvement in Vietnam from 1965 to 1973. In addition, the Alliance has been torn by debates over the Multilateral Force, the Skybolt incident, and Greek-Turkish conflicts over Cyprus.

3. The current situation in NATO is unique because the Alliance now faces multiple strains which tend to reinforce one another. This study reviews the different attitudes that the allies have towards Soviet behavior, out of area problems, international economic difficulties, and defense doctrine and responsibilities. In addition, NATO faces internal tensions created by the anti-nuclear movement, continued Greek-Turkish disputes, and the specter of Eurocommunism. Many of these controversies are magnified because Europe's growing self-confidence makes it easier for countries to express more openly doubts they have often felt about American policies. But NATO controversies in general resemble the controversies which enliven democratic societies but do not undermine their legitimacy.

4. The multiple nature of the strains facing NATO today has, however, created an atmosphere in which problems in one area can spill over into other areas. As a result, NATO's basic cohesion can now be threatened if policy makers mismanage certain critical issues including sanctions against the Soviet Union, U.S. troop reductions under a revised Mansfield amendment, and implementation of NATO's dual

track decision on intermediate range nuclear weapons. Thus, special care must be taken by partners on both sides of the Atlantic to manage current problems with extra caution and sensitivity.

THE ALLIANCE AND EASTERN POLICY

5. Since 1967, NATO has officially set twin tasks of defense and the search for a more stable relationship with the East. Détente has been in disrepute in the United States for some time, but continental Europeans have seen more tangible political, humanitarian and trade benefits, and do not want to entirely abandon cooperative relationships with the Soviet Union and Eastern Europe.

6. The Polish crisis poses the old question: to what degree is it possible to modify Soviet behavior in Eastern Europe, and what are the most effective means? The Polish crisis is also the first time NATO has tried itself to deal with Soviet repression in Eastern Europe. Earlier crises were dealt with by the Three Allied Powers or in the U.N. Thus, it is not surprising that it has been difficult to develop a consensus on sanctions.

7. In general, European sanctions in reaction to martial law in Poland have paralleled U.S. sanctions in scope and severity. One exception—U.S. restrictions on export of oil and gas equipment—involves a fundamental trade asymmetry in which Europe exports primarily heavy industrial goods to the East while the United States exports primarily agricultural goods. Europeans resent U.S. willingness to sacrifice their pipeline but not our grain. Most Europeans and many Americans believe that the United States cannot now stop the Siberian pipeline, only delay it a year or so. The policy issue thus becomes: is the delay worth a major Alliance confrontation and further erosion of U.S. exporters' reliability?

8. The Reagan Administration's East-West economic policy remains in the formative stages, with some advisors advocating economic warfare while others advocate more limited trade restrictions. The Administration does appear to be shifting focus from the gas pipeline to the broader and longer term area of credit terms for trade with the East. There appears to be some support for this approach in Western Europe, but time and effort will be needed to develop even a modest consensus.

9. Among NATO members, the Federal Republic of Germany feels Alliance tension over Eastern policy most acutely. German concerns go beyond trade to the deeply felt need to build closer and more normal relations with East Germany. West Germans resent being pushed to choose between the Alliance and Ostpolitik. Internally, the FRG's economic, generational and political strains make it more difficult for West Germans to deal with tension in their Alliance relationship.

OUT OF AREA ISSUES

10. NATO's formal mandate does not encompass defending the vital interests of its various members outside of the treaty area. Historically the United States has resisted bringing the colonial and post-colonial commitments of Europe under the NATO umbrella. This long-held view has been modified in recent years by the United States as a result

of the extraordinary impact of increased Western dependence on Persian Gulf oil, the revolution in Iran, and the Soviet invasion of Afghanistan. Despite their economic dependence, Europeans were less emotionally affected by these events and resist extending the NATO security area to include the Persian Gulf. Most United States policy makers now also agree that formally extending NATO's area of commitment is unrealistic.

11. The United States is currently constructing the third security framework for the Persian Gulf in two decades. Under this new framework, security of the region would for the first time in postwar history rely in large measure on United States combat units. The possible diversion of U.S. forces from NATO-designated responsibilities to the Persian Gulf has created new requirements for the European members of NATO. These new requirements include both efforts to support the United States within the Southwest Asian region and also efforts within Europe to compensate for the possible diversion of U.S. forces.

12. West Europeans have responded to this new challenge with the German concept of "division of labor," which places emphasis on European compensation within NATO for U.S. activities out of area and providing more assistance to key countries in or near the region, such as Turkey and Pakistan. Progress has been made in implementation of the division of labor, but there is still general resistance in Europe to embracing a commitment for significant compensation measures until NATO has a clearer picture of U.S. Rapid Deployment Force contingency plans and until Europe undergoes an economic recovery. There have been increases in European aid to Turkey and Pakistan, but not commensurate with corresponding U.S. activity in the region.

13. The extent of U.S.-European cooperation in Southwest Asia is significantly greater than is commonly realized. Both the French and British have combat vessels in the Indian Ocean. Both the French and British also have military advisors in key countries in the region as well as small but newly reinforced rapid reaction forces that could support the U.S. Rapid Deployment Force in regional conflicts.

14. In areas outside of the Persian Gulf, the record of U.S.-European accord on security issues is mixed. The European Community's Venice Declaration of 1979 on the Arab-Israeli dispute is seen by the Europeans as parallel with the Camp David process while many Americans see it as contradictory. However, recent contributions to the Sinai multilateral observer force by France, Britain, Italy, the Netherlands and Norway are crucial to United States efforts to implement the Camp David Accords. U.S.-European cooperation in Africa has generally been strong as is witnessed by the successful Lancaster House negotiations on Zimbabwe and work of the Allied Contact Group on Namibian independence. There is, however, a rising chorus of criticism in Europe over United States priorities and tactics in Central America. United States efforts to work through Mexico to begin indirect negotiations with Nicaragua and Cuba may help reduce European concerns.

ECONOMIC TENSIONS AMONG TRADING PARTNERS

15. The economic problems confronting NATO members are exacerbating other problems in the Alliance. Divergent macro-economic

policies are the primary source of current tension between the allies. High U.S. interest rates are blamed by Europeans for attracting short-term capital funds to the United States, driving up the dollar's exchange value relative to European currencies and pulling up interest rates in Europe. European governments, especially the Federal Republic of Germany, point out that the more expensive U.S. dollar increases the cost of buying U.S. military equipment as well as importing oil, while higher interest rates increase government budget deficits in Europe, which makes it all the harder to meet defense spending commitments.

16. Economic recovery on both sides of the Atlantic is both essential and urgent in order to allay tensions and relieve pressure on defense budgets throughout NATO. What many Europeans suggest at this juncture is strikingly similar to what many American economists and Congressional leaders suggest: reduce the projected U.S. federal budget deficit, especially for the "out years" (fiscal year 1984 and beyond), and allow a slightly higher rate of monetary growth. Some Europeans even say that the long-term security of NATO countries can be enhanced more by the economic benefits of a less rapid acceleration of U.S. defense spending than by the short-term military enhancement the additional budget dollars would purchase.

17. The European members of NATO face a formidable economic challenge for the remainder of this decade. In order to reduce their present high unemployment they must either grow much faster than recent experience and economic forecasts indicate is likely, or achieve substantial structural adjustments in their economies. Many Europeans, therefore, have grave concerns about economic and political stability over the next 5 to 10 years. They see their economic dilemma as profoundly different from that facing the United States. They fear that a slow growth, low inflation program which might prove quite tolerable in the United States would worsen NATO Europe's unemployment problem. They also fear that U.S. trade policies could make European structural adjustment less likely. They cite steel and agricultural trade as prime examples.

18. The Europeans are especially dismayed that the United States is aggressively raising trade disputes related to the dumping of steel and agricultural products despite having a $13.5 billion merchandise trade surplus with the European Community in 1981. They suggest that it is in the interest of the United States as well as Europe to downplay the trade issues until a strong economic recovery is underway on both sides of the Atlantic.

MILITARY DOCTRINE, FORCE POSTURE, AND U.S. TROOP REDUCTIONS

19. Since 1967, NATO's military doctrine and force posture have been firmly anchored to the twin pillars of flexible response and forward defense. Flexible response calls for a "seamless web" of military capabilities across the entire spectrum of possible conflict while forward defense recognizes the West German geo-political imperative of halting a Soviet attack near the border. While both concepts have come under criticism in the past, many military analysts today are increasingly questioning whether the web of NATO military capabilities is indeed seamless and whether the emphasis on a firepower-intensive

linear defense continues to make sense in light of the current conventional military balance in Europe. Military critics are also concerned that with the advent of the highly accurate and mobile Soviet SS-20 and enhanced Soviet air defense, the theater nuclear force balance is shifting against NATO just when the strategic nuclear balance reaches parity. Despite these criticisms, however, officials of NATO governments show no signs of wavering from flexible response or forward defense.

20. Rather than changing its basic doctrine, NATO has responded to its critics by promoting an across-the-board revitalization and modernization of its military capabilities. During the past 5 years, NATO and the United States have:

(a) established the goal of 3 percent real growth in Alliance defense spending;

(b) adopted a Long-Term Defense Program which recommends implementation of 123 force improvement measures;

(c) designed a Master Restationing Plan to correct maldeployment of U.S. forces in West Germany; and

(d) agreed in December 1979 to a "dual track" decision to deploy intermediate range nuclear (INF) weapons in Europe unless arms control negotiations produce agreed reductions.

21. The costs associated with NATO's force improvement programs have sharpened debate within the Alliance on the question of burden sharing, an issue which, from the American perspective at least, has been made more pressing by the new U.S. defense commitments in the Persian Gulf region. To a large degree, the burden sharing debate has been institutionalized by the 3 percent real growth goal. The Alliance as a whole surpassed this goal in 1980 and 1981. Seven to nine NATO countries—including the United States—met this objective in 1981 while the non-U.S. average was about a 2.6 percent increase. Taking into account current economic problems and budget pressures in Europe, there is little doubt that Allied defense ministers have lobbied their cabinets fairly effectively to produce significant increases. There is, however, doubt that they will be as successful in 1982.

22. Another test of the ability of the NATO alliance to implement modernization programs needed to preserve the credibility and integrity of its doctrine of flexible response is the 1979 NATO Dual Track decision. This decision to deploy intermediate range nuclear missiles in Europe has been challenged by opposition parties and the nuclear disarmament movement. This dissension has created strong doubts as to whether the Netherlands and, to a lesser degree, Belgium, will be able to follow through on NATO's nuclear deployment policy. There is a risk that Britain might default in the unlikely case that the Labour Party is able to form a viable minority government. It is most likely that both West Germany and Italy will be faithful to the December 1979 NATO decision. A major test is developing within Chancellor Schmidt's Social Democratic Party which could be brought to a head during the April 1982 party conference. Should the SPD support a moratorium on INF deployment and thus reject Schmidt's position, either Schmidt would govern without SPD support on this issue or a center-right coalition would be formed.

23. Despite the impressive array of NATO force modernization initiatives, the Alliance has been largely outpaced by the continuing

momentum of the Soviet military buildup. The Soviet buildup, however, has not led to the general assessment that NATO would suffer defeat in war. Rather, most analysts believe that many factors such as NATO's defensive role, Warsaw Pact coalition reliability, and the threat of Allied escalation contribute to a continued deterrence of any Soviet attack on Western Europe.

24. The United States and the Soviet Union remain far apart in their INF negotiating positions. Most officials agree that the Soviet Union is not likely to show flexibility in its negotiating position until it is evident that the new NATO INF systems will be deployed. In addition, officials in key arms control positions in Europe believe the Soviet Union will negotiate more seriously in the INF talks once the START talks are underway.

25. Within the last year, three alternatives to NATO's traditional doctrine and force posture have begun to emerge. The first is a Dutch proposal that NATO shed some of its nuclear roles in exchange for a significantly augmented conventional defense. Although the Dutch government is earnest about its proposal, it is not likely that it will attract wide support within NATO.

26. The second proposal, recently advanced by the Reagan Administration, would place a far greater premium on the global flexibility of U.S. forces and hold open the option of responding to aggression in one region (such as the Central Front in Europe) by retaliating in other regions. The key to this strategy, known as "horizontal escalation," rests in the reassertion of U.S. maritime superiority. Although the Administration staunchly denies that its new, more global and offensive-oriented strategy reflects a moving away from NATO, many critics are not so sure. These critics charge that there is simply not enough money in the defense budget to build a 600-ship navy and maintain our current force presence in Europe.

27. A third and related proposal under consideration by both liberals and conservatives in Congress is a revival of the Mansfield amendment. It is proposed variously to prompt tougher European actions against Poland, to encourage greater European burden sharing, and to provide U.S. budget savings. Complete withdrawal of U.S. forces over a short period of time would represent such a drastic shift in U.S. policy that its overall consequences would be catastrophic. The idea of partial or phased withdrawals, however, does have appeal for some. But in the current political climate, any significant withdrawals would be seen as punitive and would clearly provoke an angry, confused, and divisive European reaction that would severely harm NATO cohesion.

THE ANTI-NUCLEAR MOVEMENT IN EUROPE

28. During most of 1981, the U.S. Government was not adequately sensitive to the impact on European opinion of its public discussions about limited nuclear war and its confrontational rhetoric aimed at the Soviet Union. Combined with European economic recession, cultural changes in Europe, and effective Soviet propaganda, U.S. rhetoric has added to European grassroots anxiety about nuclear war.

29. This anxiety has manifested itself in extremely strong European opposition to neutron bomb deployment and growing opposition

to INF deployments. This anxiety, however, should not be interpreted as overwhelming European support for unilateral nuclear disarmament, neutralism, or anti-Americanism. Polls show that a majority of Europeans continue to support NATO, INF deployment tied to continued negotiations, and friendship with the United States. Thus far the majority opinion in Europe does not support the aspirations of Europe's nuclear disarmament groups. But the trends are in the wrong direction and could cause long-term problems for NATO if allowed to continue.

30. Many Americans tend to overemphasize the extent to which nuclear disarmament groups in Europe are instruments of the Soviet Union. The Soviets clearly attempt to support, influence, and exploit the movement in many ways, but they did not create it nor do they direct it. The Soviets, however, would clearly gain if programs for unilateral nuclear disarmament were implemented. Much of the impetus behind Europe's nuclear disarmament movement comes from Dutch church groups with strong establishment credentials. The movement in Britain is less clerical but is also centrally organized under the Campaign for Nuclear Disarmament (CND). The movement in West Germany has no comparable umbrella organization but consists of environmentalists, youth groups, church groups, and professional groups.

31. President Reagan's November 18, 1981 zero option speech slowed the momentum of Europe's nuclear disarmament groups, but the setback may be short lived. The organizations and anxieties remain, and many observers believe that U.S. decisions on chemical weapons production will trigger a severe response in Germany this spring. In addition, the U.S. nuclear freeze movement is beginning to have the effect of reinforcing the European anti-nuclear movement. There is likely to be a tactical shift within the movement in 1982, with less emphasis on mass demonstrations and greater involvement in civil disobedience. President Reagan's June trip to the Bonn NATO ministerial meeting will be an exception, and massive demonstrations are now being planned.

GREEK-TURKISH ISSUES

32. The new Greek government of Prime Minister Andreas Papandreou has yet to fully formulate and implement its policy towards NATO and the United States. One clear aspect of its emerging policy is a call for a NATO security guarantee of Greece's eastern border. Papandreou has stated his opposition to the presence of foreign bases on Greek soil in the long run, but he has said Greece will not act unilaterally and in the short run he may feel that it is in the Greek national interest to allow them to remain. The United States is awaiting his initiative on this matter.

33. The new Turkish military government of General Kenan Evren has significantly reduced the number of terrorist killings, restored a widespread sense of internal security, proceeded with successful economic austerity measures, and convened a Constituent Assembly to draft a new constitution. The price for this progress has been military rule, temporary abolishment of political parties, and the jailing of some political leaders.

34. Greek-Turkish disputes continue in the Aegean and on Cyprus. Greek hints that they may extend the offshore territorial boundary

of their Aegean islands to 12 miles might if implemented because of war between these two NATO allies. Turkey would consider such an act as effectively closing the Aegean to Turkish high seas passage. Limited progress is reported in the inter-communal talks in Cyprus with an exchange of proposals and a new U.N. framework for negotiations.

35. In all issues concerning Greek-Turkish problems, the United States may be best advised to remain patient, judicious and even-handed in efforts to maintain good relations with both of our allies.

THE SPECTER OF EUROCOMMUNISM

36. In the mid-1970's, three West European Communist parties—the Italian, French, and Spanish—became associated with a new term, "Eurocommunism," which connoted an acceptance of democratic values and rejection of Soviet leadership. This phenomenon raised the issue of whether such parties should be deemed acceptable participants in Western European governments. Since then, the issue has faded, as has the idea of a Eurocommunist "movement." The French Communist party has reverted to its more traditional Stalinist tendencies and lost electoral strength (its role in the Mitterrand government being only token) while the Spanish party has failed to become a serious aspirant to governmental power. In Italy, however, the Communist party remains the dominant party of the left and has distanced itself further than ever from Moscow. The issue of substantial "Eurocommunist" participation in a major NATO government could thus arise again, depending on the outcome of Italy's next general election.

SPANISH ENTRY INTO NATO

37. Early this spring, the Senate ratified a NATO protocol approving Spanish entry into NATO. At a time when many commentators are focusing on NATO's problems, one key European country has thus decided to join the Alliance. Spanish entry may encounter some delays, but officials hope that all NATO countries can agree to the protocol by early this summer.

[Reproduced from U.S. Library of Congress. Foreign Affairs and National Defense Division. NATO after Afghanistan; report prepared for the Subcommittee on Europe and the Middle East of the Committee on Foreign Affairs, U.S. House of Representatives. Washington, U.S. Govt. Print. Off., 1981.]

THE EUROPEAN CONTRIBUTION TO NATO[1]

The impact of the Afghanistan invasion on the alliance has suggested the need for a reevaluation of alliance strategy to take account of threats outside the formal NATO boundary and for a concerted effort to improve the credibility of the existing strategy of flexible response. This has in turn stimulated proposals for a possible redistribution of responsibilities and tasks or a new "division of labor." In order to assess the courses of action open to the alliance, therefore, it is necessary to examine briefly the current state of the alliance, the prevailing economic conditions among its members, and their respective contributions to NATO.

A. ECONOMIC BACKGROUND

Under the division of labor concept, the most appropriate contribution for the allies to make concerning the new security dimension would be to assume a larger role in the defense of Western Europe. Undertaking additional tasks and responsibilities would necessitate either the provision of additional funds or the more effective use of existing resources (a perennial NATO exercise) or, preferably, both.

In most member countries, however, prevailing economic circumstances involving a general decline in economic growth and increasing pressure for cuts in government expenditure, in addition to strong competition for resources from other sectors of the economy, produce strong pressures against the allocation of extra funds for defense. Though such patterns also characterize the U.S. economy, attitudes toward defense are markedly different. With the exception of the United Kingdom, the widespread public support for increased defense spending that currently exists in the United States is not reflected in European countries. While a substantial number of NATO countries have managed to achieve the commitment made in 1977 to maintain a real increase of 3 percent in defense expenditure,[2] most have done so only with considerable difficulty. Furthermore, in contrast to U.S. officials who now regard the 3 percent as the bare minimum essential for the continued credibility of the alliance,[3] European officials tend to regard it as the maximum obtainable, within which any future requirements must fit. Future economic trends hold little hope for improvement and several countries have warned that defense cannot be insulated from general cuts in overall expenditure.

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[1] This analysis will focus on the European contribution to NATO since it is the ability and the willingness of European nations to contribute equitably to the defense of European security and interests which is consistently questioned by American public opinion. The valuable role Canada plays in the alliance should not be overlooked, and it should be noted that Canada maintains an Armored Brigade (3,000 men) in the Federal Republic of Germany, comprising 2 infantry battalions, an armored regiment equipped with Leopard tanks, and self-propelled artillery. It also stations 53 combat aircraft in West Germany

[2] The pattern in this respect is uneven. Some countries, achieved the 3 percent in 1978 but not in 1979 and vice versa. See table VI, appendix 1.

[3] It should be noted that the force goals established by NATO's military authorities for the period 1981–86 call for countries to accept increases in defense spending of approximately 4 percent. These force goals were evolved prior to Afghanistan.

Even more significant than the economic factors inhibiting the provision of additional resources are the factors which increasingly limit the effective utilization of existing expenditure. Even when the 3-percent real growth commitment is met, the rising costs of personnel, of increasingly sophisticated equipment, and particularly of fuel, mean that the increase is barely sufficient to keep a country marking time. In other words, 3-percent growth facilitates the fulfillment of existing and planned programs, but is unlikely to buy additional capabilities. As economic trends necessitate savings in other key sectors of the economy, the problem of the allocation and utilization of existing defense resources is likely to get even more acute. In the words of one defense economist:

> * * * in defense resources management the problems of the 1980's will be those of the 1960's and 1970's writ larger.[4]

Given this background, it seems highly unlikely that European members will be willing to contribute substantially more to defense than is currently planned. In the absence of extra funds, doing more will almost certainly be achieved by giving priority to certain tasks or measures at the expense of existing or other planned capabilities. Improvements in certain areas will inevitably result in the postponement or elimination of other capabilities.

It should of course be noted that major plans to enhance NATO's defense capabilities have been in progress for 2 years. In June 1978, NATO embarked on a 15-year program designed to eliminate critical deficiencies in 10 key areas of NATO's defense posture. The invasion of Afghanistan has served to underline the importance of this program and the commitments it implies. NATO must now decide the extent to which these long-term defense program (LTDP) commitments should be reassessed in order to take account of the new strategic realities resulting from the Soviet intervention. In other words, certain areas may need to be given a higher priority and their implementation accelerated.[5] This in turn may require a change and possibly an increase in funding schedules, which in current circumstances will be difficult to achieve.

Implementation of the LTDP commitments has been uneven. Despite the supposed impetus of Afghanistan, slippage and lack of progress has been reported in several areas. In this respect, problems affecting the implementation of the LTDP symbolize two obstacles inherent in the nature of the alliance which will similarly affect new post-Afghanistan initiatives: First, defense planning remains a national prerogative to which NATO can only offer certain guidelines within specific areas; and second, the long lead times and advance commitment of resources necessary for most projects means that the flexibility of any government to reallocate priorities and funds, in the short term, is very limited.

The current British defense white paper illustrates this problem. Referring to that part of the equipment procurement program (some 60 percent) which is devoted to major projects, it comments that:

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[4] David Greenwood. "Economic Constraints and European Defense Efforts." Center for Defense Studies. University of Aberdeen.

[5] For details of NATO's proposal in this respect, see pages 32–36.

> In "year 1", the year immediately ahead, over 90 percent represents expenditure on projects to which the Department is effectively committed by past decisions to enter full developments or embark on production to meet the requirements of the Services. This proportion decreases as one looks further ahead, and by "year 7" for example is of the order of 60 percent. The deployment of the balance of 40 percent at that point can thus be influenced by decisions that are yet to be taken on bringing new projects firmly into the procurement program. It is possible to increase the relatively low proportion of spending in the earlier years which is amenable to new decisions, but only at the cost of changes in existing full development and production programs.[6]

One of the major successes of the LTDP lay in the degree of coordination it achieved in alliance defense planning over the next 15 years. However, it was always acknowledged that while political endorsement of the LTDP objectives was easily attained, the actual implementation of its recommendations would be far more difficult, particularly where the adjustment of existing national plans was concerned.

Post-Afghanistan initiatives will face identical problems. Although, as will be discussed later, defense ministers have accepted NATO's proposals concerning adjustments and new priorities, they have done so with a number of qualifications concerning actual implementation (notably, general economic circumstances allowing; as long as the required changes are within the financial framework established by the 3 percent real growth commitment; and on the understanding that adopting new tasks will result in changes to existing ones).

B. DIFFERENCES IN PERCEPTIONS

Economic circumstances alone cannot explain European reluctance to follow the United States in devoting more resources to defense. This reluctance is also due to differences in attitudes and perceptions concerning the international environment, the role of military power, and the Soviet threat. In the United States, a series of events have produced a general perception among American public opinion of growing American weakness and vulnerability, particularly vis-a-vis the Soviet Union. These events include: the SALT II debate with its emphasis on the growth of Soviet strategic power and the vulnerability of American landbased missiles; persistent reports of continuous improvements to, and general expansion of, Soviet general purpose forces, and also of the spread of Soviet influence worldwide; the Cuban brigade episode; the general uncertainty concerning oil supplies; the seizure of the American hostages in Tehran; and the Soviet invasion of Afghanistan. The general sense of American decline caused by the combined effect of these events has stimulated public support for higher defense spending as a means to correct this trend.

While several of these issues have had equal significance for Europe, reactions there have been very different. Time and space permit only a very limited treatment of the variety of reasons for these differences in perception, several of which have been mentioned earlier in the study.

The mood of urgency and concern, and even at times of bellicosity, that has existed in the United States as a result of these events, particularly from the sense of growing Soviet power and American inadequacy, has not been reflected in Europe. Certainly Europeans are well aware of, and concerned at, the implications of several aspects of current Soviet policies. However, after years of close proximity to the Soviet Union, they have learned to live with, and adjust to, the realities of Soviet military power. Vulnerability is a condition with which Europeans are familiar. Their policies toward the Soviet Union have evolved not from a feeling of weakness but from a sober assessment of the requirements for permanent stability and security in Europe. This assessment has produced the dual principles of defense and détente on which NATO policy toward the East is now based.

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[6] Defense in the 1980's (April 1980).

In terms of defense, European governments tend to believe that their current efforts are sufficient for the objectives of NATO's strategy of deterrence. Within NATO, weaknesses are recognized to exist, and these are being continuously addressed, but the answers to NATO's military problems are being sought through the more effective use of existing resources rather than higher expenditures. Globally, as already discussed, Europeans tend to place a higher premium on political and economic influence than on the role of military power.

The détente part of NATO's policy is pursued through an emphasis on arms control and by cooperation with the East across a broad range of areas. If détente appears to be receiving excessive emphasis by European leaders, and if European leaders appear to be asserting an increasingly independent role, it is not out of fear caused through the decline of American power (as many American critics attempt to argue). Rather, it is because of the recent inconsistencies in American foreign policy and particularly the emphasis that the United States has been placing on defense to the apparent neglect of détente.

Thus, differences in perception over the nature and scale of the threat and the policies and means needed to counter it are as important as economic circumstances in explaining the divergence in views on defense spending.

C. Measuring Defense Efforts [7]

In order to place a potential alliance response to Afghanistan in perspective, it is useful to have a general idea of the state of the alliance and particularly the current contribution made by America's allies to NATO defense. It is equally important to note that assessing the defense contributions of individual members is a complex and frequently artificial process. Measurements of defense effort are frequently based on data which are highly selective and therefore only give part of the overall picture, or include substantial inaccuracies due to differences in definition.

Assessments of defense effort can be made either by examining input, that is, the amount of resources a country devotes to defense, or output, that is, the actual capabilities that this expenditure buys.

Measurements of input or resources devoted to defense can be done in a number of ways involving economic criteria:

—total amount of expenditures on defense;

—percentage of gross domestic product (GDP) (this represents the total defense expenditure as a percentage of the country's GDP);

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[7] For a thorough discussion of the burden sharing issue, see "Burden sharing in NATO," by Gavin Kennedy. Holmes & Meier, Publishers, Inc., 1979.

—per capita expenditure (represents the amount spent on defense per head of population);

—percentage of the national budget (represents the proportion allocated to defense in the national budget and indicates the priority given to defense relative to other sectors of the economy);

Measurements of output involve a number of criteria that demonstrate how defense expenditure is spent:

—the percentages allocated to certain key areas (personnel, equipment, research and development, et cetera);

—the capabilities purchased in terms of manpower and equipment.

However, the use of any of the above as a basis for comparing defense efforts must be qualified, as they all suffer from a variety of limitations. These include:

—The variability of currency exchanges. Any comparisons that involve currency conversion must be treated with caution because of fluctuations in exchange rates.

—Definitional problems. Countries define certain key data in differing ways. For example, countries include different functions in the defense budget. While NATO has adopted a common formula on which to base its assessments, certain national differences persist.

—Measurements based on percentage GDP or per capita. These provide no idea of the baseline capacities, that is, the total GDP or total population of the country involved. In this sense, such comparisons give no idea of the wealth of the particular society and therefore its ability to allocate more resources to defense.

—Measurements of single year performances. These give no indication of trends: first, with regard to overall GDP growth, that is, the correlation between the rise or fall of a nation's GDP and the fluctuations in its defense spending; second, in terms of past performances of defense spending; for example, German officials argued that West Germany's initial failure to reach the 3-percent commitment this year was less culpable than the failure of others because its defense spending had consistently increased by 3 percent for the past decade.

—Indicators showing the proportion of the national budget devoted to defense are influenced by the size and shape of the respective budgets. In some countries, national budgets are "all embracing," in others government expenditure is smaller. In the Federal Republic of Germany, for example, the Länder have substantial budgetary responsibilities.

—Economic indicators also fail to reflect certain distortions due to differing tax structures. Some member countries tax their armed forces fairly heavily, with the result that a substantial proportion of their expenditure on defense returns to the Treasury. Others impose much lower rates of taxation.

—General economic criteria give no indication of how the money is spent, or of a number of hidden factors such as conscription, or the involvement of the population in defense, as in Scandinavia, which may permit a country to do more in effective combat terms with a lower expenditure.

—Static indicators measuring output fail to account for a range of intangibles such as the training and morale of forces and the quality of their equipment.

—Neither measurements of input or output acknowledge the hidden costs and benefits of alliance membership involved in the provision of territory for bases.

—In comparing NATO defense expenditures, it is difficult in the case of certain countries to isolate those elements that are specifically NATO-related. This is particularly true for the United States; it was true for Portugal during her military involvement in Africa; and in the same respect it could be argued the main driving force behind recent increases in Greek and Turkish defense expenditures has been their mutual hostility rather than fear of the Warsaw Pact.

The concept of burden sharing or equity in defense effort is a highly complex and frequently subjective process. Central to any assessment of a country's defense contribution must be its economic capacity or wealth, its sense of vulnerability, its perception of the threat, and a number of extraneous factors such as cultural and historical influences. With regard to these factors, the members of the alliance operate from different perspectives and their defense efforts vary accordingly. Defense remains a national prerogative, and while NATO develops a consensus on important policy guidelines and actions, the actual implementation of these agreed measures frequently reflects these national differences in perspective. Because alliance initiatives are frequently driven by the largest and most militarily capable partner, the United States, it is not surprising that smaller nations with fewer resources are unwilling to implement all aspects of these proposals.

The nature and structure of the alliance therefore militates against the production of a formula that would effectively compare defense spending or define an equitable distribution of the defense burden. Efforts to do so that are based on narrow and selective economic criteria not only fail to reflect the essential complexity of the alliance but also distort the relationships implied in membership.

Finally, it is also frequently argued that looking only at expenditure on defense represents a limited view of security. In this respect assistance to less prosperous nations which contributes to their stability is an equally important component of Western security policy. This applies within the alliance with regard to assistance to Greece, Turkey, and Portugal, in which the Federal Republic has played a major role. It also applies to assistance to developing nations, a field in which the European nations bilaterally and through the European Community play a prominent role.

D. CURRENT EUROPEAN CONTRIBUTION TO NATO

The purpose of the preceding section has been to identify the problems involved in any attempt to assess the defense contributions of member countries of the alliance. Time and space have not permitted a detailed examination of the complex issue of burden sharing, or of the full range of issues involved in assessing the costs and benefits accruing to each individual country through its membership in the alliance.

Appendix 1 contains a number of statistics which provide a broad measure of the contribution of European members to NATO defense, in terms of both output and input. While this selection of statistics is by no means definitive, it includes most of the criteria that are normally used in assessments of defense contributions.

With regard to input and the tables in appendix I, it is clear that, in most cases, assessment of a country's performance depends on the indicator chosen. In other words, European nations can be shown to be doing enough or not enough, depending on the economic criteria used. A true perspective on a nation's defense contribution can only be achieved through an assessment based on a variety of measurements.

Measurements of output are easier but still subject to qualification, as any assessment of force levels is scenario dependent. However, even with this limitation in mind it can be seen that Europeans provide the majority of air and land combat forces stationed in peacetime in Central Europe. As the statistics in tables XIII and XIV demonstrate, in the central region, they provide 74 percent of the manpower (90 percent in Europe as a whole), 79 percent of the divisional strength, 75 percent of the combat aircraft and 70 percent of the tanks.

The following analysis summarizes the principal elements of individual allied contributions to NATO defense. It concentrates on the contributions to active peacetime strength in the central region; more detailed discussion of naval contributions and of the role of reserves is included in later sections.

In certain respects, it can be said that a de facto division of labor within NATO already exists in the sense that different nations possess different capabilities. While a greater degree of specialization would make for increased efficiency and cost effectiveness, the multinational, rather than supranational, nature of the alliance will always inhibit progress in this area.

1. NUCLEAR FORCES

The United Kingdom and France each deploy strategic and theater nuclear forces. The United Kingdom's nuclear forces are assigned to NATO, but they can be used only on the express authority of the British Government at the highest level. The French nuclear deterrent is totally independent. Both countries are about to embark on modernization programs for their nuclear forces. France has announced the intention to develop a mobile ballistic missile to replace its land-based ballistic missiles and a new generation of strategic submarines for the 1990's and has commenced with the procurement of a sixth strategic submarine and a new SLBM with multiple warheads (the M-4). The French Army also plans to develop a replacement for its Pluton battlefield nuclear system and has expressed interest in the development of an enhanced radiation warhead (ERW). The recent announcement of the testing of an ERW[8] has led to speculation that the production of this capability represents a gradual evolution of French deterrence doctrine away from massive and immediate retaliation to one of graduated response including that of a tactical exchange. General Mery, Chief of the Armed Forces General Staff, has denied that production of an ERW implies a change in the French concept of deterrence. "Nuclear deterrence remains primarily a dialog with the enemy so as to avoid using the nuclear weapon."[9] The French view, according to General Mery, remains that the use of the ERW "in battle on the nuclear threshold" would soon become uncontrollable, and in this sense "the idea of its use is different from that of the United States General Staff."[10]

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[8] French President Giscard d'Estaing has said that a production decision could be made in 1982 or 1983 if the weapon's present configuration is used.

The United Kingdom has recently carried out a program (code-named Chevaline) to improve the Polaris missile, which will retain the effectiveness of the Polaris force into the 1990's. The Conservative government has recently announced its decision to maintain its sea-based deterrent force into the 21st century through the purchase from the United States of the Trident I ballistic missiles and support technology. The Trident missile[11] will be deployed on four or five new British-built nuclear powered submarines in the early 1990's. The United Kingdom will manufacture its own warheads, but will probably require American assistance in the provision of nuclear materials for the 800 warheads. In agreeing to participate in the NATO LRTNF decision, the United Kingdom has consented to stationing 164 U.S. controlled ground-launched cruise missiles on its territory.

Apart from their nuclear capabilities, both countries retain a full spectrum of defense capabilities including substantial ground forces, a full range of air capabilities, "blue water" navies,[12] and modest intervention capabilities. In this respect, many observers believe that nuclear modernization will only be achieved at the expense of these conventional capabilities.[13]

A number of other European countries (the Federal Republic, Belgium, the Netherlands, Italy, Turkey, Greece, Portugal) are involved with nuclear systems through the deployment of dual capable systems under the dual-key[14] system, or through the deployment of U.S. nuclear forces on their territory. The alliance recently agreed to the production and deployment of 572 warheads on a mixture of cruise missiles and Pershing II's as a necessary modernization of NATO's long range theater nuclear forces (LRTNF). The United Kingdom, the Federal Republic, and Italy each agreed to the deployment of a number of these systems on their territory. Belgium and the Netherlands, the other two candidates for deployment, both endorsed the modernization decision. But both countries submitted slightly different reservations which effectively withheld the agreement to deploy these systems, Belgium for a period of 6 months, the Netherlands for 2 years, pending developments in arms control negotiations. Belgium subsequently extended the 6-month period.

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[9] General Mery, as quoted in Le Monde (Apr. 26, 1980).

[10] Ibid.

[11] The Trident I missile has double the range of Polaris, that is, approximately 4,000 miles; it carries eight to ten MIRV's. The total cost of replacing the existing force has been estimated at approximately $12 billion, including $2.5 billion to buy about 100 Trident missiles and associated equipment.

[12] One difference in this respect is that whereas France retains two aircraft carriers, the United Kingdom retired her last carrier last year and is deploying antisubmarine carriers or 'through deck' cruisers.

[13] For detailed discussion of the United Kingdom's predicament, see "The Polaris Successor System: At What Cost?" by David Greenwood. Aberdeen studies in defense economics. University of Aberdeen.

[14] The launcher is deployed by the host nation but the nuclear warhead is held in American custody.

In late September 1980, the Belgium Government reaffirmed its solidarity with the NATO decision to modernize its LRTNF. However, due to domestic political considerations, it continued to assert that deployment of theater nuclear systems on its soil would be contingent upon ongoing arms negotiations.

2. CONVENTIONAL FORCES

The United Kingdom stations 55,000 troops[15] in Germany[16] (the permanent peacetime elements of one British Corps are four armoured divisions, one artillery division, and units of the 5th Field Force). In an emergency, the current size of the British Army on the Rhine (BAOR) would be doubled by reinforcements from the United Kingdom. Seventy percent of the British Army would then be in Central Europe under NATO command. The United Kingdom also stations 11 squadrons of aircraft in Germany.

The Anglo-German offset agreement of 1977 which partially offset the foreign exchange costs of British Forces Germany (BFG) ends this year. Henceforth, the United Kingdom must meet these costs unaided and the 1980 British White Paper on Defense comments that the lack of offsets and the rising trend of stationing costs "will limit our ability to improve the fighting effectiveness of BAOR and RAF Germany as we would like." In peacetime, BAOR forces absorb 15.9 percent of British defense spending, and the foreign exchange costs of BAOR now exceeds 750 million pounds. In this respect, if the expenditure on a new deterrent force were to necessitate cuts in other areas, then the present size of BAOR or one of the air roles would appear to be prime candidates for such savings.

The current British Government has been prominent in arguing for a higher defense spending:

> * * * we believe that this is a time for giving a higher, not lower, priority, to defense—for our allies as well as ourselves.

In its determination to meet the 3-percent commitment in the coming years (this year's budget represents a real increase of 3.6 percent) the Government has noted that at a time when it is reducing overall public expenditure,

> * * * adherence to the NATO aim logically entails a switch of resources from civilian programs to defense.

Thus in 1979 pounds, defense spending is intended to rise from 7,997 million pounds in 1980–81 to 8,760 million pounds in 1983–84 during a period when total public expenditure is to fall from 75 to 71 billion pounds, and defense's share of the budget rises from 11 percent to 12 percent. Even this determination, however, is qualified by reference to economic circumstances.

> The scale of our defense effort cannot be divorced from our general economic capability, and we all know that Britain is going through difficult times.

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[15] According to the defense estimates approximately 3,000 men are deployed away from BAOR (British Army on the Rhine) at any one time on short tours in Northern Ireland. The total size of the British Army is 163 681.

[16] Under the Brussels Treaty as modified by the Paris Agreements of 1954, Britain is committed to maintaining four divisions and the Second Tactical Air Force in Germany. If the maintenance of these forces at any time throws too great a strain on the external finances of the United Kingdom then, according to the Treaty, the U.K. can invite the North Atlantic Council to review the financial conditions on which the U.K. formations are maintained.

In accepting the most recent NATO proposals, British defense officials have stressed that these must be within the limits of the 3 percent real growth and that increases in certain areas may involve a readjustment in priorities and conceivably a reduction in effort in others.

In France, the army, which will receive 30 percent of the French defense budget, has a current strength of 320,000 men. France also stations ground forces in the Federal Republic, currently three French divisions totaling approximately 34,000 men.

Defense expenditure represents 18 percent of the total national budget and it is intended that this will rise to 20 percent by 1982. However, current economic circumstances have led French officials to doubt whether the 20-percent objective is attainable. French defense expenditure as a percentage of GNP has been rising since 1977 and has consistently surpassed the current NATO objective of a 3-percent increase in real terms. However, the nuclear forces have traditionally absorbed a high proportion of the defense budget, to the detriment of French conventional forces. While nuclear forces will continue to be given first priority, a greater emphasis has been announced on improving the conventional forces. In its long-term planning the Government has declared a higher priority for naval forces.[17]

France remains outside the integrated military command, that is, no French troops are formally committed to NATO and France does not participate in any formal NATO planning for military contingencies.[18] But French troops exercise on a bilateral basis with other allied forces and many observers have interpreted the doctrine of "enlarged sanctuarization" as announced by General Mery in 1976 as signaling a shift from a purely national deterrence concept to a greater French contribution to the defense of Europe. Despite these factors, French determination to maintain "autonomy of decision" in all aspects of its security policy creates a permanent degree of uncertainty concerning possible French actions. Gen. Lucien Poirier expressed this ambiguity as follows:

> We therefore face the following problem; how to participate with our conventional forces alone in the common forward defense in the not unlikely eventuality that the NATO defense is pierced locally * * * political and strategic logic argues against our committing our forces to fill any breach in the allied defense systems, for to do so would be to run the risk of seeing our conventional forces * * * prematurely wiped out and France unprotected against an enemy on the threshold of our "sacrosanct space." [19]

The forces of the Federal Republic of Germany represent the hard core of NATO defense. The total peacetime strength of the Bundeswehr is 495,000 [20] which can be increased to 1.2 million on short notice. All German forces are fully committed to NATO. German ground forces number 355,200 comprising a field army of 3 army corps with 36 combat brigades, all well-equipped, well-trained and at a high state of readiness, and a territorial army.

German officials express their satisfaction with Germany's contribution to the alliance for several reasons: the fact that the Federal Republic has increased its defense spending by 3 percent in real terms every year for the past 10 years, the increase for 1980 was below 3 percent but a supplementary budget brought it close to 3 percent (this increase will mainly be used to cover additional fuel costs and military and economic assistance to Turkey); the lead West Germany has taken in providing assistance to economically weaker allies, notably Turkey and Portugal; and finally, the high quality of Bundeswehr men and equipment, partly the result of devoting a consistently high share of the defense budget to equipment and partly due to the system of conscription which means that "each year a fresh breeze comes into the army with 260,000 men" (Apel), and insures that defense is firmly embedded in the national consciousness. German officials stress that the quality of capability purchased is as important as the quantity spent. "The defense budget is important but what is most important is to have men who know what they are inwardly defending and who are inwardly prepared to do it." [20a]

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[17] For further details of French naval forces, see pp. 32–35.

[18] France does participate in the integrated NATO air defense system, NADGE.

[19] Gen. Lucien Poirier in a statement to the North Atlantic Assembly's subcommittee on defense cooperation (Dec. 4–5, 1979).

[20] The size of the Bundeswehr is established by the Brussels Treaty as amended by the Paris Agreement of 1954. While the precise ceiling is classified, it is thought to be around the current total.

German officials have indicated a willingness to discuss a new allocation of tasks within NATO, but insist that it must involve alliance wide participation. Commenting on the budget supplement, Defense Minister Apel stated,

> Other elements may, and I think will, be added. But we must not anticipate Cabinet and allied talks. If we are supposed to do something about ammunition stockpiling, for example, then, others must do that jointly with us. They must not rely on well stocked German depots believing they need not make any financial sacrifices.[21]

Moreover, German defense officials stress that any discussion of new arrangements must not alter the present balance of forces. "What must be avoided is the dissolution of the close troop combination of all allied troops in Europe. It is an inalienable part of our operational defense." [22]

Finally, they emphasize that the further increase in the 1980 defense budget for fuel and economic assistance was at the expense of other public expenditures.

Both the Netherlands and Belgium make smaller but nevertheless substantial contributions to the defense of the Central Region. The total active strength of the Netherlands Armed Forces is 114,820 (50,050 conscripts). Except for a small group of territorial forces, all Dutch forces are assigned or earmarked for NATO. The Dutch active ground forces number 75,000. The major fighting unit is one Dutch corps comprising two divisions of six brigades; each division has one-third of its wartime combat in the reserve component. A third division is comprised entirely of reservists. One Dutch brigade (fully ready) is stationed in the Federal Republic; the other five active brigades are stationed in the Netherlands. Dutch officials estimate that it would take 5 days for the two Dutch divisions to be fully operational in West Germany. Improving the reaction time of the Dutch corps is an important measure in the readiness package of the LTDP. One option to satisfy this requirement would be to station another brigade in Germany, but the financial implications [23] of such a development are so high that it could only be achieved at the expense of other important commitments. The Netherlands Government is therefore unwilling to pursue this option. Instead, it is instituting a number of modest but cost-effective measures to improve the reaction capabilities of the Army Corps as a whole. The majority of these measures will be put into effect in the NATO planning period for 1981–86.

[20a] Chancellor Schmidt in Köln (Apr. 20, 1980).

[21] Defense Minister Apel, West Berlin Radio (Mar. 2, 1980).

[22] Ibid.

[23] These include extra pay for "foreign posting," substantial infrastructure costs, and additional transport costs. As with the other Allies who station troops in Germany, with the exception of the United Kingdom, the Netherlands receives no offset payments for the expenses incurred by these deployments.

Dutch attitudes to nuclear weapons and certain aspects of the policies concerning the personnel of their armed forces (the role of unions, et cetera) has created a somewhat negative reputation in the alliance, which distracts from their very substantial conventional contribution. In fact, Dutch conventional forces are well regarded by NATO officials. Dutch defense spending has been consistently close to the 3-percent real growth commitment (this year it is 2.9 percent), and Dutch forces are currently undergoing substantial modernization; for example, the Army is purchasing Leopard II tanks and APC's and the Air Force has just received the first of its 102 F–16's. Furthermore, Dutch officials emphasize the high standard of their conscripts; they take 40 out of every 100 available. This is borne out by the number of NATO competitions won by Dutch units. It should also be noted that the Dutch battalion (800 men) serving with the United Nations force in Lebanon has received high marks for its performance.

In common with several member governments, the Dutch Government has made an overall reduction in its 1980 national budget. It was originally believed that defense would have to take its share in this reduction; in fact, Defense Minister Scholten stated that the planned 2.9 percent real increase "will not be able to remain unaffected." However, the Dutch Cabinet has since decided that defense expenditure will not be included in these reductions. But economic circumstances will mean that the Netherlands will have to look very carefully at the implications of the most recent NATO initiatives.

The total active strength of the Belgian Armed Forces is 86,000 (23,600 conscripts). The Belgian Army has 62,300 men organized into two divisions. The Belgian corps stationed in the Federal Republic has a peacetime strength of 30,832 (64 percent of these are regulars).

Belgian defense expenditure represents 3.3 percent of GNP, but it is only 6.5 percent of the state budget. Recent parliamentary debates revealed that Belgian military expenditure is being increasingly absorbed by personnel costs incurred through the scheme to professionalize the army. These costs and the escalation in fuel prices are forcing a substantial cutback in the operational training of all three sectors of the armed forces. Furthermore, the country's relatively short period of national military service, 10 months for those in Belgium, 8 for those posted to Germany, has been criticized as being inadequate, particularly with regard to the training necessary for sophisticated weapons.

Apart from the political fragility caused by the continuing linguistic friction, Belgium has serious economic problems. The Belgian Government has insisted that defense must be equally affected by its recently announced austerity program and the general reduction in Government spending. Prime Minister Martens stated that the 1981 budget will also be marked by very strict implementation of the "zero growth" principle according to which no public expenditure except priority expenditure, national debt and unemployment benefits, must increase at a faster rate than inflation.

In addition to this decision not to increase the defense budget in real terms, Belgium is not participating in the NATO AWACS program; and, while the Belgian Government endorsed the NATO LRTNF modernization decision, it delayed its decision concerning the deployment of cruise missiles on Belgian territory. These trends have given rise to considerable concern among NATO officials over the continuing effectiveness of the Belgian Armed Forces, including a representation by NATO Secretary General Luns to Prime Minister Martens concerning the declining Belgian defense contribution.

Concerning a possible reallocation of tasks in the alliance, the recently formed government stated in a declaration of its general principles that,

> Belgium will however make sure that the obligations that it takes on remain within the geographical area defined in the treaty. In the event that the alliance decides to change the strategic concept applied to the Central Europe theater, Belgium would ask its partners to reexamine the deployment of Belgian forces stationed in West Germany, in the perspective of more forces being stationed in Belgium.

In common with several of her partners Belgium is finding the cost of stationing troops in Germany increasingly difficult to sustain.

3. THE FLANKS

While the main area of focus of this study has been the central region, as being the area most directly affected by a U.S. reorientation, brief reference should be made to the flank areas.

The northern flank[24] is of considerable significance to NATO, as it blocks one of the main access routes for the projection of Soviet air and sea power. Despite its increasing strategic, military, and economic significance, military activity in the northern region is relatively low key. Denmark and Norway both maintain small regular forces, depending on the rapid mobilization of reserves and the involvement of the local population through the Home Guard. NATO strategy for the defense of the north relies on the introduction of external reinforcements consisting of contingents from Canada, the United Kingdom and the United States (mainly airpower). The current security arrangements in the north, the so-called nordic balance, provide a distinctive example of the accommodation of national interests within alliance membership, and of the balance needed to satisfy these national perspectives and simultaneously fulfill the demands of collective defense.

Both Norway and Denmark face similar economic problems as their NATO partners. The situation in Denmark is particularly acute, however, and several Danish political parties are demanding that the defense budget be held down along with the rest of public spending. The Danish defense budget is fixed by an all-party agreement at 4-year intervals. Negotiations are now underway for the period 1981–85.

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[24] For a detailed analysis of the problems of the northern region, see Security in the Northern Region, a report published by the North Atlantic Assembly. January 1980.

The Danish Prime Minister recently announced that, like Belgium, the Danish defense budget will be allowed to rise only to account for inflation. A recent statement by the NATO Subcommittee of the House Armed Services Committee (HASC), following a visit to Denmark, criticized the Danish defense effort and said that the HASC members were "distressed" at the Danish Government's position on defense spending.

The southern flank[25] is the largest of the regions under Allied Command Europe and offers a wider range of national perspectives than any other region. It is isolated from Central Europe and geographically fragmented. The main area of orientation for NATO is maintaining freedom of transit in the Mediterranean. Therefore, naval forces play a dominant role in NATO defense planning for the region.

Two of the countries comprising the southern flank, Greece and Turkey, have substantially less well developed economies than their Central European partners, and have received substantial economic and military assistance, particularly from the United States. The third southern flank country, Italy, has also suffered substantial recurring economic problems.

Despite these economic obstacles, Italy has been proceeding with the modernization of her armed forces through the 10-year "promotion" laws. These laws apply to each of the armed services and are supplementary to the normal defense budget. The Italian Navy plays a significant role in the Mediterranean, and new units, including a through-deck cruiser and guided-missile frigates, will add to existing capabilities.

For the past decade the southern flank has been dominated by the friction between Greece and Turkey,[26] and specifically by the Turkish intervention on Cyprus in 1974 which led to Greece's withdrawal from the NATO integrated military command. The friction over Cyprus and other issues has led both countries to devote a relatively large proportion of scarce resources to defense. Both countries possess substantial, if somewhat aging, military capabilities which, however, are oriented more toward each other than toward the Warsaw Pact. The operational efficiency of the Turkish armed forces was particularly severely affected by the U.S. arms embargo.

Portugal does not fall within the Southern Flank Command—AF South—but comes under Iberlant—Iberian Atlantic Area. Since its withdrawal from Africa, Portugal has sought to play a more prominent military role in the alliance, and priority has been given to the formation of an air transportable NATO brigade. However, in the establishment and equipping of this force, as with modernization proposals for other services, Portugal is very largely dependent on military assistance from her allies. Unfortunately, with the exception of the United States and Germany, offers of assistance have been slow to materialize in actual equipment. After the NATO brigade, emphasis has been placed on modernizing the Air Force through the purchase of the A–7. It has also been decided to equip the Navy with three new frigates. These, however, would have to be commonly funded through NATO and so far details of how this would be accomplished have yet to be worked out.

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[25] For discussion of current problems see "Perspectives on NATO's Southern Flank" a report by Senators Baker and Biden to the Committee on Foreign Relations, U.S. Senate, June 1980, and forthcoming report by the subcommittee on the southern region of the North Atlantic Assembly.

[26] For a full discussion of the problems of the eastern Mediterranean, see "Turkey, Greece, and NATO: the Strained Alliance," a staff report to the Committee on Foreign Relations, U.S. Senate, March 1980; and "Turkey's Problems and Prospects: Implications for U.S. Interests," report prepared for the Committee on Foreign Affairs, Subcommittee on Europe and the Middle East, U.S. House of Representatives, by the Foreign Affairs and National Defense Division, Congressional Research Service, Library of Congress (Mar. 3, 1980).

The general picture of the European contribution is mixed. It is probably best summarized as being substantially better than most Americans believe, but still not as good as many military and defense officials would like. However, officials on both sides of the Atlantic are concerned at a number of trends that suggest that certain of the smaller countries are not taking their full share of the security responsibilities inherent in membership of the alliance. These trends could have unfortunate consequences for the cohesion of the alliance.

E. CONGRESSIONAL ATTITUDES

Despite the substantial defense contributions of the NATO members, the view that the United States provides a disproportionate share of the security of the Western Alliance and that the European Allies are not doing enough has long been prevalent among a substantial number of U.S. Members of Congress. This view has become more widespread and has intensified in the period immediately following the recent events in Southwest Asia. Already a number of indications exist that Congress is going to scrutinize closely the defense contributions of its Allies, and that the question of burden sharing is likely to reemerge as a prominent issue in transatlantic relations.

In consideration of the 1981 defense budget, the Senate Armed Services Committee passed a provision which referred to allied defense commitments. As sponsor of the provision, Senator Levin commented that the provision,

> * * * highlights the concern of many in this body as well as the American public about the willingness of our NATO allies and Japan to shoulder more of a burden in their own defense and to contribute to the costs of maintaining American forces in their nations.

To underscore its concerns, the committee has directed the Secretary of Defense, in an annual report to Congress, to evaluate the degree to which the United States and its NATO allies are meeting the 3 percent real growth commitments and their contributions to meet the LTDP. It also directs the Secretary to report to Congress annually on the scope and composition of burden sharing within the NATO alliance and with Japan. Finally, the President is urged, in law, to reopen the question of offset arrangements with nations in which the United States forces operate.[27]

Several Senators have reflected their concern over these issues:

> If the United States is to assume the primary responsibility for the defense of Western interests in the Indian Ocean and Persian Gulf, do we not have a moral right to ask that our allies assume a greater portion of the burden of their own defense?
>
> Senator SAM NUNN.[28]

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[27] For full text of the provision on allied defense commitments, see appendix 3.

[28] Hearings before Committee on Armed Services, U.S. Senate, 96th Congress, 2d session, on S. 2294.

> * * * many Americans are perplexed by the apparent reluctance of parts of NATO Europe to do more for local defense or to contribute to Persian Gulf security, where the risks to European well-being greatly exceed those of the United States * * * in today's climate, the commitment to a 3 percent real growth should be viewed as a floor—a minimum. In fact, to meet these new challenges, it may be necessary to raise the real growth commitment to a more appropriate level.
>
> Senator HENRY JACKSON.[29]

> * * * my intention in offering these amendments is to drive home the point that our allies must carry a larger share of the burdens of world security and development * * * Our prosperous NATO and Japanese allies should assume more of our base operating support costs in their countries.
>
> Senator LARRY PRESSLER.[30]

Opinion in the House of Representatives has reflected similar sentiment. The House Armed Services Committee (HASC) has also manifested strong interest in examining the contributions of NATO allies. HASC has focused its attention on capabilities rather than expenditures. Last year, the committee requested the Secretary of Defense to report to Congress on the state of NATO readiness. While the report that has emerged is not as comprehensive as had been hoped, it has confirmed many of the concerns felt by Members regarding the contributions of NATO allies. The HASC will pursue this approach again this year, but will press for more specific and precise information.

Similar concern has been reflected in other House committees. The chairman of the Government Operations Committee, Congressman Jack Brooks, has recently initiated a major study of the implementation of the LTDP. Announcing this review, Congressman Brooks said:

> The progress achieved in implementing the LTDP proposals will provide an accurate measure of the willingness of NATO members to devote the resources necessary for NATO defense and particularly their commitment to the agreed 3 percent annual real increase in defense spending.

In a different context, the House Appropriations Subcommittee on Military Construction recommended the deletion of funds, requested by the administration, for the families of American servicemen stationed in NATO facilities that should, in the subcommittee view, be paid for by the host nation that benefits from the presence of the troops. Proposing this deletion, Congressman McEwen said that the issue of burden sharing within the NATO alliance was of growing importance to the United States in a time of increasing defense commitments worldwide.

> In recent years * * * several of our allies have been content to overburden the United States with respect to the provision of certain components of our common defense * * * the Committee has reluctantly determined to propel the administration to action through certain steps we have proposed which should leave no doubt about the intentions of this Congress to introduce equity to relative burden sharing in the NATO alliance.[31]

Commenting on the same legislation and referring to the added mission in the Persian Gulf for the United States, Congressman McKay said,

> We feel it is time that the foreign nations where U.S. troops are stationed must begin to come up with more support for our forces as well as their own. We are putting more of our gross national product on defense than any of our

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[29] Ibid.
[30] Congressional Record, Apr. 26, 1980.
[31] Congressional Record, June 27, 1980.

> principal allies. When we do that, that allows them to contribute more to economic matters which puts us in an unfair advantage in world markets and trade.[52]

Criticism of current burden sharing arrangements has also surfaced in relation to specific cooperative projects. A recent General Accounting Office report on NATO's airborne early warning and control program commented that

> GAO believes that the United States has not put enough emphasis on obtaining commitments from participating NATO allies to equitably share in any program cost increases over and above the amounts provided for in the basic agreement.[53]

It should also be noted that the Republican Party platform makes explicit reference to the need to insure a fair share of the common defense effort within the alliance:

> In pledging renewed U.S. leadership, cooperation, and consultation, Republicans assert their expectation that each of the allies will bear a fair share of the common defense effort and that they will work closely together in support of common alliance goals.

American observers have also expressed disagreement with the apparent European interpretation of the new division of labor, that is that Europeans would do more in political and economic terms while the United States provides the military input. This criticism was summarized by former Secretary of State Henry Kissinger:

> The Western Alliance will surely be jeopardized by the new theory of "division of labor" by which the Europeans seek to retain the benefits of a relaxation of tensions while we assume all the burdens and risks of resisting Soviet expansion.[54]

These comments could represent nothing more than a temporary phase, but they could also constitute the embryonic stirrings of a serious congressional reexamination of the NATO relationship.

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[52] Ibid.

[53] GAO Report to Congress. Equitable Cost Sharing Questioned on NATO's Airborne Early Warning and Control Program. July 1, 1980.

[54] Quoted by Senator Larry Pressler. Congressional Record, Apr. 26, 1980.

AN ALLIANCE RESPONSE TO AFGHANISTAN

A. U.S. INITIATIVES IN NATO

Before endorsing the concept of a coordinated response to events in Southwest Asia, NATO members will have to agree on the fundamental objectives underlying such a response. If it is accepted that the area is vital to Western security, that regional stability should be actively encouraged, and that Soviet influence, direct or indirect, should be prevented, what courses of action are most likely to serve these objectives: Military, political or economic, or a combination? If improved military capabilities are considered necessary, what would be the precise purpose: To deter the Soviet Union, to reassure regional allies, to safeguard the sealanes of communication, to facilitate intervention against subversive elements, or to "win" any outbreak of hostilities? Should the emphasis be on permanent "in place" highly visible forces or on rapid reaction "surge" forces, and how should they be structured? What sort of contributions can the non-U.S. members of the alliance be expected to make?

Many of these questions constitute unilateral American defense decisions, but the involvement of the alliance, either directly or indirectly, will imply alliance endorsement of these objectives and policies. In assessing the potential for alliance involvement, it is important to distinguish between the political and military character of the alliance. While the scope for coordinated military action by NATO members is limited by the charter of the alliance, political action can be far more comprehensive.

The policies currently under consideration center around the need to improve the Western military presence in the area, in terms of both permanent and "surge" forces, and the need to strengthen Western links with regional states in the Gulf area by way of military and economic assistance in the hope of improving political stability. The United States will shoulder most of the burden involved in establishing a more visible Western military presence, but its allies could make substantial contributions both directly and indirectly.

The United States has made specific suggestions to NATO concerning potential Allied contributions to this new security dimension. They consist of: assisting the United States in the establishment of a permanent naval presence in the gulf region; permitting the United States the use of facilities that would ease the deployment and sustenance of American forces to the gulf region; developing existing political influence and military and economic assistance to strengthen Western influence with regional states; and assuming a greater share of the defense of Western Europe, thereby allowing the United States flexibility in the use of forces earmarked for use in the European theater. These proposals imply a reassessment by the alliance of the allocation of defense responsibilities, and they were discussed at the meeting of

APPENDIX 1*

TABLES ON ALLIANCE DEFENSE EXPENDITURES AND CONTRIBUTIONS

TABLE I.—DEFENSE EXPENDITURES IN U.S. DOLLARS

[In millions of dollars]

	1969 [1]	1972 [2]	1975 [3]	1977 [4]	1979 [4]
Belgium	769	1,008	1,971	2,444	3,636
Britain	5,406	7,889	11,118	11,722	17,572
Denmark	386	484	939	1,084	1,559
France	6,179	7,360	13,984	11,880	18,776
West Germany [5]	6,743	8,975	16,142	16,814	24,391
Greece	425	574	1,435	1,100	[6] 1,700
Italy	2,424	3,715	4,700	5,104	7,089
Luxembourg	9	12	22	29	42
Netherlands	1,142	1,559	2,978	3,719	4,767
Norway	376	498	929	1,132	1,421
Portugal	399	594	1,088	470	587
Turkey	385	703	2,200	2,429	2,591
NATO, European total	24,642	33,371	57,506	57,927	84,131
Canada	1,935	2,238	2,965	3,617	3,751
NATO, Non-U.S. total	26,577	35,609	60,471	61,544	87,882
United States	81,443	77,639	88,983	100,928	114,503
NATO, total	108,020	113,248	149,454	162,472	202,385
European and Canadian expenditures as a share of all NATO (percent)	24.6	31.4	40.5	37.9	43.4
European expenditures as a share of all NATO (percent)	22.7	29.7	38.5	35.7	41.6

[1] From Military Balance, 1973–74 (International Institute for Strategic Studies, London). Figures are in 1972 dollars.
[2] Military Balance, 1975–76.
[3] Military Balance, 1978–79.
[4] Military Balance, 1979–80, p. 94.
[5] Excludes financial aid to West Berlin.
[6] Estimate.

Note: Since 1970, the effective exchange rate of the U.S. dollar has dropped approximately 20 percent. Only against British, Canadian, Italian, Greek, Portuguese, and Turkish currencies has the U.S. dollar increased in value. These nations contributed just 16.4 percent of total NATO expenditures in 1979. When computing national defense spending from local currencies into dollars, the devaluation of the dollar will result in higher defense expenditures for the stronger currencies and a smaller share of NATO spending for the United States.

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*Because of the problems involved in obtaining reliable comparable data (rarely do the various public sources available agree on the same items) and because of the problems outlined on pages 13 and 14, the following tables should be used with caution.

TABLE II.—NATO POPULATION AND DEFENSE EXPENDITURE PERCENTAGES

	1970[1]		1972		1974		1976		1979[4]	
	Pop.[2]	Def. exp.[3]	Pop.	Def. exp.	Pop.	Def. exp.	Pop.	Def. exp.	Pop.	Def. exp.
Belgium	1.8	0.7	1.8	0.9	1.8	1.1	1.8	1.3	1.8	1.7
Britain	10.4	5.6	10.3	7.0	10.2	7.4	10.1	6.7	9.8	8.4
Canada	4.0	1.9	4.0	2.0	4.1	2.2	4.1	2.2	4.2	1.8
Denmark	.9	.4	.9	.4	.9	.5	.9	.5	.9	.7
France	9.6	5.7	9.6	6.5	9.6	7.4	9.5	8.0	9.4	8.9
West Germany	11.4	6.0	11.4	7.9	11.3	10.3	11.2	9.5	10.8	11.6
Greece	1.7	.5	1.6	.5	1.6	.6	1.6	.8	1.7	[5] .8
Italy	10.0	2.4	10.1	3.3	10.0	3.3	10.1	2.4	10.0	3.4
Luxembourg	.1	0	.1	0	.1	0	.1	0	.1	0
Netherlands	2.5	1.1	2.5	1.4	2.5	1.8	2.5	1.8	2.5	2.3
Norway	.7	.4	.7	.4	.7	.5	.7	.6	.7	.7
Portugal	1.6	.4	1.6	.5	1.5	.7	1.6	.5	1.7	.3
Turkey	6.6	.4	6.8	.6	7.1	.9	7.2	1.8	7.8	1.2
United States	38.6	74.6	38.6	68.6	38.6	63.4	38.6	64.2	38.6	58.2

[1] Figures from 1970 through 1976 are from "NATO Defense Expenditures Analyzed" by Dr. William G. Lese, Jr., a research project for the National War College, Mar. 2, 1978.

[2] Population.

[3] Defense expenditure.

[4] Figures compiled from Military Balance, 1979–80, data on population and defense expenditures.

[5] Estimated.

Note: For example, in 1970, Belgian defense expenditures equalled 0.7 percent of all NATO expenditures, while Belgium's population was 1.8 percent of total NATO population. In 1970, the United States, on the other hand, with a 33.6-percent share of NATO's population, contributed 74.6 percent of NATO's total military budget.

TABLE III.—PERCENTAGE OF GNP SPENT ON DEFENSE

[In local currency]

	1971[1]	1973[2]	1975[3]	1978[3]	1978 GNP, in billions
Belgium	2.8	2.7	3.0	3.5	$97.6
Britain	5.0	4.9	4.9	4.7	302
Canada	2.3	2.0	2.2	1.8	204
Denmark	2.5	2.1	2.2	[4] 2.4	55.3
France	3.9	3.5	3.9	3.3	463
West Germany	3.3	3.4	3.7	3.4	634
Greece	4.7	4.1	6.9	4.7	32.3
Italy	2.9	3.0	2.6	2.4	259
Luxembourg	.8	.8	1.1	[4] 1.1	3.38
Netherlands	3.4	3.3	3.6	3.3	130.3
Norway	3.4	3.2	3.1	[4] 3.2	39.4
Portugal	7.3	6.2	6.0	[4] 2.8	15.58
Turkey	4.4	4.1	9.0	4.5	45.3
United States	7.1	6.1	5.9	5.0	2,107

[1] Military Balance, 1975–76.

[2] Military Balance, 1976–77.

[3] Military Balance, 1979–80.

[4] Gross domestic product at market prices, not GNP.

TABLE IV.—DEFENSE EXPENDITURES AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT IN PURCHASERS' VALUES

	Average, 1970–74	1975	1977	1979 [1]
Belgium	2.8	3.1	3.2	3.3
Britain	5.0	5.0	4.8	4.9
Canada	2.1	1.9	1.9	1.8
Denmark	2.2	2.4	2.3	2.4
France	3.9	3.8	3.9	4.0
West Germany [2]	3.5	3.6	3.4	3.3
Greece	4.4	6.5	([3])	([3])
Italy	2.7	2.5	2.4	2.3
Luxembourg	.8	1.0	1.0	1.0
Netherlands	3.4	3.5	3.5	3.3
Norway	3.2	3.2	3.1	3.2
Portugal	6.9	5.3	3.5	3.8
Turkey	4.2	([3])	([3])	([3])
NATO Europe [4] (excluding Canada)	4.0	3.7	3.5	3.6
United States	6.7	6.0	5.4	5.2
Total, NATO [4]	5.2	4.7	4.4	4.3

[1] Preliminary estimates.

[2] These percentages have been calculated without taking into account the expenditures on Berlin; if these expenses were included, the percentages would be as follows: 1975—4.4, 1977—4.2, 1979—4.1.

[3] Not available.

[4] These percentages have been calculated without Greece and Turkey.

Note: GDP is the total value of goods produced within a country in a year, whereas GNP or gross national product includes value or earnings acquired in foreign trade. Therefore, a nation with a favorable foreign trade balance (i.e., exports exceed imports) will have a GNP greater than its GDP. A country with a deficit trade balance will have a GNP lower than its GDP.

Source: NATO Review, February 1980, pp. 32–33.

TABLE V.—DEFENSE SPENDING AND FINANCIAL ASSISTANCE, 1978

[All figures in 1978 dollars and 1978 exchange rates]

		Defense spending [2]		Official development assistance [1]			Total defense and foreign assistance	
	GNP[1] (billions)	Percent of GNP	Rank	Millions	Percent of GNP	Rank	Percent of GNP	Rank
Belgium	$97.9	3.24	7	$536	0.55	5	3.79	6
Britain	308.3	4.75	2	1,472	.48	7	5.23	2
Canada	202.0	2.02	10	1,060	.52	6	2.54	9
Denmark	51.6	2.55	8	388	.75	3	3.30	8
France	471.5	3.95	3	2,705	.57	4	4.52	3
West Germany	638.6	3.35	4	2,418	.38	8	3.73	7
Italy	259.9	2.40	9	175	.07	10	2.47	10
Netherlands	130.4	3.33	5	1,074	.82	2	4.15	5
Norway	39.6	3.30	6	355	.90	1	4.20	4
United States	2,107.6	5.14	1	5,664	.27	9	5.41	1

[1] 1979 Review: Development Cooperation, Organization for Economic Cooperation, November 1979.

[2] NATO press release M–DPC–2(79)21, Dec. 11, 1979.

Source: Department of State.

TABLE VI.—PERCENTAGE CHANGE IN NATO DEFENSE SPENDING FROM PREVIOUS YEAR IN CONSTANT PRICES

	1978	1979	1980
Belgium	6.7	4.5	[1] −2.0
Britain	−0.3	3.9	3.2
Canada	−.2	.9	3.4
Denmark	3.1	.2	−.6
France	[2] 4.9	[2] 3.0	[2] 3.5
West Germany	3.0	2.0	[3] 1.0
Greece	[2] −3.2	[2] .5	(4)
Italy	3.2	.8	0
Luxembourg	7.9	1.4	17.3
Netherlands	−5.3	3.5	2.1
Norway	7.7	2.8	[1] 2.3
Portugal	1.7	12.3	(4)
Turkey	0	2.1	2.1
United States	[5] 1.5	[5] 3.2	[5] 3.2
Non-United States NATO	2.1	2.7	2.0

[1] These countries have informally indicated that their real growth for 1980 may be better than depicted here.

[2] DOD estimate.

[3] FRG officials have confirmed that the Federal Republic will achieve the 3 percent commitment for 1980.

[4] Not available.

[5] These figures are based on the NATO definition of defense spending which includes certain expenditures beyond those of the Department of Defense (e.g., DOT expenditures for the Coast Guard and DOE spending for nuclear weapons). Based on the DOD definition of defense spending, the current estimate of U.S. real growth is 0.7 percent, 3.9 percent, and 2 percent for 1978, 1979, and 1980, respectively.

Source: Department of Defense.

TABLE VII.—GROWTH OF NATO DEFENSE EXPENDITURES

[Current and constant prices [1]]

	Percent growth,[2] 1971–78 in—	
	Current prices	Constant prices
Belgium	12.94	4.75
Britain	15.03	1.62
Canada	10.55	2.72
Denmark	12.62	2.80
France	12.43	3.17
West Germany	8.26	2.91
Greece	18.65	5.49
Italy	16.29	3.08
Luxembourg	13.67	6.28
Netherlands	11.34	3.28
Norway	11.77	2.99
Portugal	9.61	−6.01
Turkey	29.92	7.80
United States	3.82	−2.69

[1] In local currency.

[2] Average annual compound growth rates.

Source: Military Balance, 1979–80.

TABLE VIII.—1978 PER CAPITA GNP COMPARED WITH 1978 PER CAPITA DEFENSE SPENDING

[In U.S. dollars]

	Per capita GNP [1]	Per capita defense spending [2]
Belgium	9,829	315
Britain	5,326	252
Canada	8,608	156
Denmark	10,886	258
France	8,598	285
West Germany	10,002	347
Greece	3,481	163
Italy	4,538	109
Luxembourg	9,260	102
Netherlands	9,340	309
Norway	9,669	308
Portugal	1,740	55
Turkey	1,076	47
United States	9,652	481

[1] Figures computed from population and GNP totals from Military Balance, 1978–79 and 1979–80.
[2] From Military Balance, 1979–80.

TABLE IX.—DEFENSE EXPENDITURES AS A PERCENTAGE OF THE NATIONAL BUDGET

	1972	1975	1979
Belgium	10.1	9.5	9.2
Britain	13.1	10.8	11.5
Canada	13.9	11.0	8.6
Denmark	8.1	7.8	7.4
France	19.0	19.1	17.5
West Germany	25.9	24.7	22.3
Greece	20.8	28.5	(1)
Italy	11.3	8.6	8.2
Luxembourg	3.1	3.1	2.9
Netherlands	12.9	11.4	9.1
Norway	9.9	8.4	9.3
Portugal	39.3	29.1	10.4
Turkey	21.1	26.6	15.6
United States	31.5	26.6	21.5

[1] Not available.

Source: Military Balance, 1975–76, 1978–79, and 1979–80.

TABLE X.—EQUIPMENT EXPENDITURES AS A PERCENTAGE OF TOTAL DEFENSE EXPENDITURES

	Fiscal years [1]			
	Average, 1970–74	1975 or 1975/76	1977 or 1977/78	1979 or 1979/80 [2]
Belgium	10.6	9.0	11.9	16.8
Britain	17.3	19.3	22.0	24.0
Canada	7.3	6.3	8.5	12.7
Denmark	16.8	19.0	21.8	16.2
France	(3)	(3)	(3)	(3)
West Germany	11.9	11.8	12.5	13.9
Greece	(3)	(3)	(3)	(3)
Italy	15.4	13.9	15.3	17.6
Luxembourg	1.6	1.0	2.0	1.6
Netherlands	12.6	15.7	20.6	18.5
Norway	13.5	11.6	14.2	17.7
Portugal	7.5	1.9	2.1	4.6
Turkey	4.0	(3)	(3)	(3)
United States	[4]21.1	[4]17.5	17.5	(3)

[1] Calendar year for all countries except for Canada and Britain (fiscal year: April–March); Denmark (fiscal years 1975/76–1977/78: April–March; fiscal year 1978: April–December; fiscal year 1979 onwards: January–December); Turkey (fiscal year: March–February) and the United States (fiscal year 1975/76: July–June; fiscal year 1976/77 onwards: October–September).
[2] Preliminary estimates.
[3] Not available.
[4] Includes ammunition and explosives.

Source: NATO Review, February 1980, pp. 32–33.

TABLE XI.—ARMED FORCES MANPOWER TRENDS

	Military only (thousands)			Total Armed Forces as percent of total labor force [2]		
	1975	1977	1979 [1]	1975	1977	1979 [1]
Belgium	103	107	121	2.8	2.8	3.1
Britain	348	326	321	2.5	2.3	2.2
Canada	78	78	79	1.2	1.1	1.1
Denmark	34	32	36	1.8	1.6	1.7
France	585	584	578	3.2	3.2	3.1
West Germany	491	495	495	2.5	2.6	2.6
Greece	185	187	(3)	6.6	6.7	(3)
Italy	459	475	490	2.5	2.5	2.5
Luxembourg	1	1	1	.8	.9	.9
Netherlands	107	103	108	2.8	2.7	2.7
Norway	38	39	40	2.8	2.7	2.7
Portugal	104	79	83	2.8	2.1	2.2
Turkey	584	(3)	(3)	3.9	(3)	(3)
NATO, Europe [4]	2,270	2,241	2,273	2.7	2.6	2.6
United States	2,098	2,060	(3)	3.3	3.1	[5] 3.0
Total, NATO	4,446	4,379	(3)	2.9	2.7	[5] 2.7

[1] Preliminary estimates.

[2] Military and civilian personnel.

[3] Not available.

[4] For purposes of comparison, the figures for Greece and Turkey, which are not available for each of the years under review have been excluded throughout from the totals. NATO Europe does not include Canada.

[5] 1978 figures.

Source: NATO Review, February 1980, p. 33.

TABLE XII.—MANPOWER DATA: TOTAL ARMED FORCES, NUMBER OF CONSCRIPTS, MILITARY SERVICE

	Total	Conscripts	Length of service
Belgium	86,800	23,600	8 to 10 mo.
Britain	323,000		Voluntary.
Canada	80,000		Do.
Denmark	34,650	10,500	9 mo.
France	509,300	274,500	12 mo.
West Germany	495,000	225,000	15 mo.
Greece	184,600	149,000	24–32 mo.
Italy	365,000	226,000	12 mo, Army and Air Force, 18 mo, Navy.
Luxembourg	660		Voluntary.
Netherlands	114,820	50,050	14 mo. Army; 14–17 mo, Navy and Air Force.
Norway	39,000	28,250	12 mo, Army; 15 mo, Navy and Air Force.
Portugal	60,500	(1)	16 mo, Army; 20–21 mo, Air Force; 24 mo, Navy.
Turkey	566,000	271,000	20 mo.
United States	2,022,000		Voluntary.

[1] Not available.

Source: Military Balance, 1979–80.

TABLE XIII.—TOTAL NUMBER OF READY FORCES IN CENTRAL EUROPE

	Number of troops	Divisions
Belgium	62,000	2
Britain	58,000	4⅙
Canada	3,000	⅓
France	34,000	3
West Germany	341,000	12
Netherlands	75,000	2
United States	193,000	5⅔
Total	766,000	29⅙

Note: European NATO countries and Canada contribute 74.5 percent of all ground forces in Central Europe. European NATO nations contribute 74.1 percent of all ground forces in Central Europe. European NATO nations and Canada contribute 79.3 percent of division strength.

	Number
Total European and Canadian NATO ground forces	1,912,000
Total U.S. ground forces stationed in Europe	203,000
NATO total ground forces in Europe	2,115,000

Note: European NATO and Canada contribute 90.4 percent of all ground forces deployed in Europe.

Source: Military Balance, 1978–79.

TABLE XIV.—*Equipment totals*

Total number of tanks in Central Europe	6,730
Of which are U.S	2,000
Non-U.S. NATO share is (percent)	70.3
Total number of aircraft in Central Europe	1,344
Of which are U.S	335
Non-U.S. NATO share is (percent)	74.9

Source.—Military Balance, 1978–79.

Note.—Central Europe here is defined as Belgium, Germany and the Netherlands, and includes the British, Canadian, and French forces stationed in Germany.

Also, the United States has 800 additional tanks pre-positioned (POMCUS) in Germany and ready for mobilization for U.S. reinforcements. If these tanks were included in the figures, the non-U.S. NATO share would decline to 62.8 percent.

Aircraft figures do not include approximately 290 U.S. planes in Spain and Britain.

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FACT SHEET: U.S. TROOPS IN EUROPE AND EUROPEAN DEFENSE EFFORTS

I. US FORCES STATIONED IN EUROPE
(as of March 31, 1981)

	ARMY	NAVY	MARINE CORPS	AIR FORCE	TOTAL DoD
Belgium	1,327	111	30	663	2,131
Germany (incl.Berlin)	210,643	291	97	36,587	247,620
Greece	556	428	16	2,396	3,396
Greenland	-	-	-	318	318
Iceland	2	1,864	127	1,009	3,002
Italy	3,976	3,626	270	4,330	12,202
Netherlands	739	15	9	1,640	2,403
Norway	37	35	44	120	236
Portugal	67	322	9	1,009	1,407
Spain	27	3,669	179	5,106	8,981
Turkey	1,155	68	20	4,002	5,245
United Kingdom	186	2,226	337	22,459	25,208
Afloat	-	21,964	1,851	-	23,815
TOTAL IN EUROPE	218,759	34,647	3,117	79,697	336,220
(TOTAL COMMITTED TO NATO)	(218,711)	(9,006)	(1,005)	(74,567)	(303,289)
NATO FORCES as % of TOTAL	28%	2%	0.05%	13%	15%

II. NATO DEFENSE EFFORTS

		Defense Spending 1981 (comparisons corrected for inflation)			
total armed forces		% change from previous year	4 year avg % change	as a % of GDP	as a % of gov't spending
109,000	Belgium	0.2	2.77	3.3	9.0
82,000	Canada	3.0	1.75	1.8	9.1
32,000	Denmark	0.1	1.35	-	7.1
575,000	France	3.5	3.97	4.2	20.5
495,000	Germany	3.4	2.55	3.4	22.6
186,000	Greece	5.6	-0.3	5.9	n.a.
505,000	Italy	-1.2	1.93	2.5	5.1
1,000	Luxembourg	7.1	8.7	1.3	3.3
107,000	Netherlands	3.4	0.25	3.2	9.5
40,000	Norway	2.5	3.48	2.9	n.a.
90,000	Portugal	2.8	4.55	3.6	10.9
741,000	Turkey	3.1	1.95	4.8	19.0
331,000	United Kingdom	2.1	1.8	5.0	12.3
2,120,000	US	5.4	3.78	5.8	23.7
3,294,000	NATO less US	2.6	2.37	-	-
5,414,000	NATO total	4.1	3.05	-	-

III. EUROPEAN FORCE LEVELS

Of the ready forces currently available in Europe, about 91% of the ground forces and 86% of the air forces come from European countries, as do 75% of NATO's tanks and more than 90% of its armored divisions.

The size of the armed forces of European countries in peacetime amounts to some 3 million, rising to nearly 6 million when reserves with an assigned role in mobilization are included. North American (U.S. and Canada) figures are 2.15 million, rising to 3 million.

IV. EUROPEAN NUCLEAR FORCES

France and Great Britain maintain strategic nuclear forces. French capabilities include 5 ballistic missile submarines with one more under construction, 18 intermediate range ballistic missiles, and 33 Mirage IVA nuclear-armed bombers. Great Britain deploys four ballistic missile submarines with Polaris missiles, scheduled to be replaced by new Trident systems; the U.K. also maintains an aging strategic bomber capability. Both countries also maintain shorter range nuclear capabilities in Europe. A number of other NATO allies man delivery systems which are planned to deliver U.S.-controlled nuclear devices in wartime.

V. EUROPEAN THIRD WORLD FORCES

European military capabilities in the third world are, for practical purposes, limited to French and British forces. The British retain a modest capability to deploy naval forces to the third world, but not without drawing down the U.K.'s contribution to NATO forces. France maintains more extensive forces, particularly in the Indian Ocean area where its fleet has made a substantial contribution to the Western naval presence in the Persian Gulf region. France also retains some ground force and intervention capabilities, primarily in African nations which were formally French colonies.

VI. REFERENCES

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Prepared by Stanley R. Sloan, Specialist in U.S. Alliance Relations and Brad Roberts, Foreign Affairs Analyst, Foreign Affairs and National Defense Division, April 8, 1982.

DEFENSE BURDEN SHARING: U.S. RELATIONS WITH NATO ALLIES AND JAPAN

ISSUE BRIEF NUMBER IB81067

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ISSUE DEFINITION

U.S. relations with its major allies -- the NATO countries and Japan -- are currently troubled by differences over what constitutes an appropriate sharing of the burdens and benefits of alliance. Following World War II, the United States imposed limits on Japan's future defense posture and similar limits were placed on West German defense potential. In addition, the United States initially discouraged other European allies from heavy spending on defense so that they might concentrate on economic recovery instead. In the last 25 years, however, the economic growth of the United States has not kept pace with that of its major allies. Meanwhile, the global political and military responsibilities of the United States have grown while the Europeans have pulled back from global military involvement. We have, therefore, increasingly looked to our allies to take on larger shares of the Western defense burden. The current issues are whether our allies should be expected to support a greater share of the Western defense effort, how contributions to Western security can most equitably be measured, what U.S. policy approaches would be most likely to encourage increased allied efforts, and what options are open to the U.S. Congress to influence U.S. policy in this area.

BACKGROUND AND POLICY ANALYSIS

The continued U.S. alliance relationships with Western Europe and Japan are dependent on the perception of both the United States and the allies that the benefits of the relationship are worth the costs involved. This issue has been part of U.S. relations with its NATO allies for almost three decades; it has only recently become a prominent consideration in U.S. policy toward Japan.

The simple fact is that, by almost any quantitative measure, the United States devotes more resources to defense than does any of its allies. The United States spends more on defense than all the European allies combined. The United States devotes in excess of 5% of its Gross Domestic Product to defense, whereas the Europeans, on the average, spend only around 3.6% of their GDP and the Japanese less than 1%.

Most Americans believe that although our defense efforts are vitally important to our own security, they also contribute a major share of the physical security enjoyed by Western Europe and Japan. Such discrepancies in defense spending were tolerable when these countries were relatively weak economically, particularly in the immediate post-war period when massive reconstruction efforts were underway. But now there is a question as to whether the allies have become too dependent on the United States militarily while reaping the advantages of the strong economies that have benefited from the security umbrella provided by the United States. Japan has resisted U.S. pressure to make substantially greater increases in its defense spending, and economic difficulties have led both the U.K. and West Germany to pull back from previously announced spending increases.

Our European allies, meanwhile, argue that they have been increasing their relative share of the burden over the years. Recently, they have suggested that high U.S. interest rates have contributed to their economic and budgetary problems, making it difficult for them to spend as much on defense as the U.S. would like. Furthermore, they argue that a variety of factors make simple measurement of their contributions misleading.

At the heart of the differences on burden sharing are some fundamentally divergent perspectives on the nature of the threat and the appropriate response. Most Europeans and Japanese do not view the Soviet threat with the same degree of concern as do American observers. Many Europeans and Japanese judge that profound Soviet weaknesses and vulnerabilities explain Soviet defense efforts and, at the same time, make unlikely any direct Soviet assault on the West. The large Soviet troop presence in Eastern Europe is viewed as due, at least in part, to the Soviet requirement for control of its cordon sanitaire rather than exclusively for mounting an eventual assault on the West. Many Japanese believe that no Soviet purpose would be served by an attack on and occupation of Japan, and that Moscow derives sufficient benefits from the current state of relations to discourage an attack on their country. In addition, both Japan and the West European countries have developed a wide range of mutually beneficial cooperation in trade and economic affairs. These interests make the allies reluctant to change their attitude toward the Soviet Union except in the most grievous case of Soviet adventurism.

As for the appropriate response, the United States tends to believe that Western security can only be guaranteed by the military capabilities to repulse any attack. Our allies, while supporting "prudent" defense efforts, prefer to concentrate on deterrence rather than on warfighting capabilities. There are inherent contradictions in this attitude to the extent that weaknesses in defense posture undercut the credibility of deterrence. But these contradictions do not overcome the more important reality for the allies: that if war came, their societies and economies would be the first (and perhaps the only) destroyed. From this perspective, it becomes less necessary to match the Warsaw Pact capability-for-capability, as long as deterrence is perceived as intact.

The fact that judgments about what constitutes "appropriate" levels and types of defense efforts must be made within this highly subjective framework helps explain why defense burden sharing has become a prominent source of disagreement between the U.S. and its major allies.

U.S. Policy Toward European Defense Efforts: Historical Perspective

Post World War II

At the end of the war, the United States began a rapid withdrawal and demobilization of its troops from Europe. The U.S. disengagement ended, however, with the breakdown of cooperation between the Western allies and the Soviet Union. By 1947, U.S. policy was focused on the need for strengthening Western Europe to counter Soviet political and military strength. The Marshall Plan became the vehicle to provide assistance for European reconstruction and recovery, and the United States encouraged the Europeans to develop regional economic cooperation to use the aid more effectively. Militarily, the post-war U.S. commitment to European defense recognized the need for a significant American input initially but anticipated that European recovery and a regional security organization in alliance with the United States would eventually provide the basis for European defense.

On June 11, 1948, following the Communist take-over in Czechoslovakia, the

U.S. Senate overwhelmingly passed the Vandenberg resolution, which expressed support for American participation in regional collective security arrangements established in accordance with Article 51 of the United Nations Charter. The resolution laid the groundwork for negotiation of the North Atlantic Treaty with the governments of Belgium, Canada, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, and the United Kingdom. The treaty was signed in Washington on Apr. 4, 1949. Greece and Turkey acceded to the treaty on Feb. 18, 1952, and the Federal Republic of Germany became a member on May 9, 1955.

The focus of U.S. policy was not a build-up of European national forces. Secretary of State Dean Acheson, testifying before the Senate Foreign Relations Committee in 1949, described the U.S. attitude in the following terms:

> ".... [Economic] recovery is a prior necessity; therefore the size of the European forces must be such that they do not interfere with recovery. And it looks as though [they] will continue to be quite small for some time."

The Korean War Aftermath

The Korean war, following on the Soviet explosion of a nuclear device in 1949, convinced American planners that the West would have to prepare to defend against a possible Soviet attack in Europe. On Sept. 9, 1950, President Truman announced the assignment of four additional U.S. divisions to Europe and in December he authorized General Eisenhower to serve as Supreme Allied Commander, Europe (SACEUR). On Apr. 4, 1951, the Senate endorsed the President's decisions, but qualified its support in Resolution 99. Resolution 99 expressed the "sense of the Senate" that, among other things, the U.S. Joint Chiefs of Staff should certify that the European allies were making a realistic effort on behalf of European defense; the European partners should make the major contribution to allied ground forces; and provisions should be made to utilize the military resources of Italy, West Germany and Spain.

Defense Review Procedure. In the early 1950s, mechanisms were established to provide for scrutiny of the defense efforts of NATO members. In particular, a defense review procedure was established so that any changes in a member's defense spending, deployment, etc., could be reviewed and criticized by other members -- in theory, in advance of the final decision by the country involved.

NATO Infrastructure. Cost sharing formulas were also arranged in the early 1950s to provide for financing of NATO "infrastructure" costs -- the expense of facilities, services, and programs regarded as of common benefit to the alliance members. The cost sharing program has operated essentially on the "ability to pay" principle. In the early days, the United States agreed to pay the largest share of infrastructure expenses. In subsequent years the U.S. share has been progressively reduced until now it now constitutes approximately 27% of infrastructure costs.

The Kennedy/Johnson Administrations

The Administration of President John F. Kennedy in the early 1960s sought a greater European contribution to Western defense. Its policy advocated an Atlantic partnership with shared responsibilities between the United States and an eventually united Europe.

Offset Agreements. The Kennedy period also witnessed the beginning of the financial arrangements between the United States and West Germany designed to "offset" the costs of stationing U.S. forces in that country. In 1961, the United States and West Germany agreed to an offset program whereby West Germany would purchase military equipment in the United States so as to compensate for U.S. military expenditures in West Germany. These agreements were renewed and expanded in the Johnson and Nixon Administrations to include German purchases of U.S. treasury bonds and, in the 1970s, repair of barracks used by U.S. forces in Germany. (German offset payments to the United States had totaled about $10 billion when the agreement ran out in 1975.)

The Vietnam experience, French withdrawal from the integrated military structure of NATO in 1966, and U.S. economic problems contributed to Johnson Administration pressures on the Europeans to increase their defense efforts and diminished support in the U.S. Congress for the U.S. overseas troop commitments in general. This produced a strong congressional movement to cut U.S. forces in Europe, led by Senator Mike Mansfield. The Senator from Montana introduced the first of the "Mansfield Resolutions" on Aug. 31, 1966. The Resolution judged that "the condition of our European allies, both economically and militarily, has appreciably improved since large contingents of forces were deployed"; the commitment by all members of the North Atlantic Treaty is based upon the full cooperation of all treaty partners in contributing materials and men on a fair and equitable basis, but "such contributions have not been forthcoming from all other members"; "relations between the two parts of Europe are now characterized by an increasing two-way flow of trade, people and their peaceful exchange"; and "the present policy of maintaining large contingents of United States forces and their dependents on the European Continent also contributes further to the fiscal and monetary problems of the United States." The Senate was asked to resolve that "a substantial reduction of United States forces permanently stationed in Europe can be made without adversely affecting either our resolve or ability to meet our commitment under the North Atlantic Treaty."

Senator Mansfield reintroduced the resolution in 1967, 1969, and 1970. When it emerged on Jan. 25, 1970, the resolution had obtained the signatures of 50 co-sponsors -- for the most part Senators regarded as political liberals. However, these resolutions and similar efforts through 1974 failed to win final passage.

The Nixon/Ford Administrations

The Nixon Administration was also concerned about U.S. balance of payments problems. But U.S. efforts to get the Europeans to "pay" for the U.S. presence in terms of new offset deals, trade or monetary concessions made little headway with the Europeans. The allies objected to the prospect of American troops becoming "little more than mercenaries" in Europe, and argued that the U.S. troop presence was, after, in America's as well as Europe's, interest.

The development of the "Nixon Doctrine," first enunciated in an Asian context in Guam in 1969 and subsequently applied globally, brought a turn away from intensive efforts to get the Europeans to redress financial imbalances caused by the troop presence. U.S. policy now focused almost exclusively on encouraging the allies to make improvements in their own defense capabilities. In December 1970, addressing the North Atlantic Council in Brussels, President Nixon elaborated on the U.S. commitment:

"NATO's conventional forces must not only be maintained, but in certain key areas strengthened. Given a similar approach by our Allies, the United States will maintain and improve its own forces in Europe and will not reduce them unless there is reciprocal action from our adversaries...." This sharp refocusing of U.S. policy set the tone for the subsequent decade.

The main success of the new U.S approach was to encourage the European allies to intensify the work of the so-called Eurogroup. The Eurogroup started as an informal caucus of European defense ministers, meeting originally in 1968. The first major Eurogroup project was the European Defense Improvement Program, announced in December 1970. The program represented about $1 billion (1970 prices) of European defense improvements over a 5-year period. It included increased European contributions to NATO infrastructure costs and special national force improvements.

A combination of events in the mid-1970s decreased congressional pressure for unilateral U.S. troop reductions in Europe. A major influence was the talks on mutual force reductions which opened between Nato and Warsaw Pact delegations in Vienna in 1973. The Nixon Administration, and the successor administration under President Gerald Ford, argued that chances of getting the Warsaw Pact countries to reduce their forces would be undermined if the United States reduced unilaterally. In addition, reports of Warsaw Pact force improvements tended to weaken the case for Western troop reductions. On the financial front, U.S. balance of payments improved considerably in 1975, lessening pressure from that quarter.

Jackson-Nunn Amendment. A prominent congressional action relating to U.S. force levels and the European defense effort in the mid-1970s was the so-called "Jackson-Nunn" amendment. In that amendment to the DoD Authorization Act, 1974 (P.L. 93-155), the Congress required that the European allies offset the balance of payments deficit incurred by the United States as a result of the 1974 costs of stationing U.S. forces in NATO Europe. Failure to offset would have resulted in automatic reductions in U.S. force levels. On June 2, 1975, President Ford in the final quarterly report to Congress on the European offset effort reported that the deficit had been more than fully offset and that the troop reduction provisions of the Jackson-Nunn amendment would not have to be implemented.

The Congress, in this period, also required the streamlining of U.S. forces and placed increased emphasis on interoperability and standardization of NATO equipment. In an amendment to the Department of Defense Authorization Act for 1975, the Congress required that U.S. support forces in Europe be cut by 18,000 men, authorizing the Secretary of Defense to increase combat personnel in Europe by an equal number.

In a further amendment to that Act, Congress required preparation of a study of the costs of NATO's past failure to standardize. In the so-called "Culver-Nunn" amendment, Section 814 of the FY76 Dod Authorization Act, the Secretary of Defense was required to report to Congress the initiation of any procurement action of any major new system not consistent with NATO standardization efforts.

The Carter Administration

Policies under President Jimmy Carter basically continued the policy approaches of the Nixon and Ford Administrations. Efforts focused on encouraging improvements in European forces, promoting efficiencies in alliance defense cooperation, and continuing to improve U.S. forces committed to NATO. In May 1977, the Carter Administration proposed a new "long-term defense program" for the Alliance. An important part of this program was that NATO countries pledge to increase defense expenditures in real terms, 3% above inflation during the life of the program. The exact nature of the pledge was left to be worked out by defense ministers of the 13 NATO countries which participate in the integrated command structure. The ministers produced the required "guidance" on this and other aspects of program on May 18, 1977. The guidance specified in part that:

> This annual increase should be in the region of 3%,
> recognizing that for some individual countires:
> economic circumstances will affect what can be achieved;
> present force contributions may justify a higher level
> of increase.

Another summit-level NATO meeting held in Washington in May 1978 approved the program of defense improvements that had been developed over the preceding year, including the 3% commitment.

In 1979 and 1980, a number of factors created renewed concern about European defense efforts. One of the products of the debate over SALT II was a consensus in support of major increases in U.S. defense expenditures. The Soviet invasion of Afghanistan reinforced this consensus in the United States. But most Europeans did not interpret the invasion as a direct threat to Europe and were therefore reluctant to see it as requiring additional defense efforts. Furthermore, economic growth slowed in most European countries in 1980 and 1981, making real increases in defense spending particularly difficult.

In 1979 and 1980, Congress showed increasing impatience with the defense efforts of the allies. An "allied commitments report" amendment to the FY81 DoD Authorization Act, (P.L. 96-342, Section 1006) became the major statement of the 96th Congress on allied defense efforts. It required the Secretary of Defense to report on allied progress toward meeting the 3% spending objective, to describe cost-sharing arrangements within NATO and with Japan, and to explain efforts being undertaken to "equalize" the sharing of defense burdens with NATO allies and Japan. The provision also expressed the sense of Congress that the President should seek increased support from host nations for the costs of stationing U.S. forces there.

The Reagan Administration

The Reagan Administration transmitted the required report to the Congress in March 1981. The report found that, on average, the allies had failed to meet the 3% objective in all three years of its existence. The non-U.S. average showed real increases of 2% (1978), 2.5% (1979) and 2% (1980). The report said that failure of the allies to meet the commitment could be seen by the Soviet Union as "a weakening of our collective resolve" and could "result in widespread shortfalls in meeting NATO force goals." But the report also said that "fixed percentage contributions from allied governments are an issue of somewhat lesser importance than development of a mutually agreed, coherent effort to counter the Soviet challenge." It concluded that, based on quantitative indicators developed for the report, the allies as a group appear to be shouldering at least their fair share of the NATO and Japan defense burden, with some allies carrying somewhat more than their "fair share" and others less.

By March 1982, negotiations begun during the Carter Administration on wartime host nation support had led to agreement with West Germany on additional facilities and services that the Germans would provide to facilitate the arrival of American troops in an emergency. This would include various logistics support, maintenance, hospital and other facilities that would reduce the logistics "tail" required to be brought from the United States or supported by the United States in Germany. Negotiations are continuing to develop a companion program of peacetime host nation support.

The Congress approved funds in the FY82 military construction authorization to begin the "master restationing plan" under which U.S. troops would be moved from metropolitan areas in south/central Germany to new bases nearer the eastern borders. In approving funds for new facilities at Vilseck, about 50 kilometers from the Czech border, the Congress required that Germany appoint a negotiator and "start negotiations in good faith toward Federal Republic of Germany funding participation." The conference committee report made it clear that it was the intent of the Congress that no funds be expended until the German government demonstrated its intent to share more fully the costs of restationing.

In spite of difficult economic circumstances, the NATO allies came very close to meeting the 3% spending objective in 1981. Eight NATO countries, including the United States, met or exceeded a 3% real increase. West Germany, which had been expected to fall far short of the goal, ultimately realized a 3.4% increase.

The Reagan Administration has lobbied with the allies to encourage increased defense spending. The Administration has at the same time told the Congress that European contributions to Western defense are more substantial than they are often portrayed in the United States.

Meanwhile, U.S. attempts to promote closer defense cooperation in NATO suffered a setback in December 1981 when the Congress, in approving the FY82 defense appropriations act, included a number of provisions that inhibit armaments cooperation and make purchase of European-made weapons systems extremely difficult. The actions have been protested by a number of NATO allies and the Administration apparently will seek changes in some of the provisions in legislation this year.

U.S. Policy Toward Japanese Defense Efforts

Post World War II

The U.S. approach toward Japan was similar to that taken toward Europe. American post-war policy sought a Japan that would be "completely disarmed and demilitarized." Under the close supervision of General Douglas MacArthur and his staff, Japanese officials adopted a constitution in 1946 which effectively renounced force or the threat of force as instruments of national policy and prohibited the maintenance by Japan of "land, sea, and air forces, as well as other war potential."

Japanese Foreign Minister Shigeru Yoshida, in June 1946, said that the new constitution did not specifically deny the right of self-defense, but General MacArthur set the tone of U.S. policy by describing Japan as the "Switzerland of the Far East."

The Korean War Aftermath

The Communist takeover of China in 1949 and the Korean war produced changes in U.S. policy toward Japanese defense efforts. In the Far East as in Europe, the United States began constructing a defense alliance system, in Japan's case embodies in the 1951 U.S.-Japan Security Treaty.

The bilateral treaty committed the United States to respond to an attack on Japan -- no reciprocal obligation was included for Japan. The changing political and strategic situation had already been reflected in 1950 when General MacArthur ordered the creation of a National Police Reserve of 75,000 men while calling on the Japanese to "mount the maximum defensive power which their resources will permit." In 1954, the Japanese government formally created the Japanese Self Defense Forces. The forces were authorized within the boundaries set by the post-war constraints and were limited to a total of 250,000 men. These legal constraints and, more importantly, the pacifism and anti-militaristic attitudes spawned by Japan's devastating defeat in the war kept a tight lid on Japanese defense efforts for the next twenty years.

The Kennedy/Johnson Administrations

A new U.S.-Japan Security Treaty was signed in 1960. While U.S. policy in Europe already was to prod the allies to do more, the new treaty with Japan actually backed away from the expectation of the 1951 accord that Japan would assume more responsibility for its own defense. The 1960 treaty was negotiated against the backdrop of continuing public opposition in Japan to defense efforts in general and reservations about a strong security tie to the United States in particular. Reflecting concern for this domestic political problem, the new treaty soft-pedaled Japanese defense efforts and re-emphasized the U.S. commitment. There was no significant outcry from American policy makers when, in the mid-1960s, the Japanese government adopted an annual limit on defense spending of no more than 1% of GNP.

The Nixon/Ford Administrations

The new Nixon Doctrine carried many implications for defense relations with Japan. In Asia, the termination of the Vietnam war led to a massive reduction in the force presence that had been built up before and during the conflict. By 1973, U.S. forces in Japan-proper had dropped to around 21,000, compared to nearly 60,000 in 1960. The Nixon Doctrine also set the stage for subsequent reductions in the U.S. naval presence in the Pacific, specifically from three carrier task groups to two. The implication of the Nixon Doctrine was that Japan would have to assume more of the burden of securing Western interests in Asia. But neither the Nixon nor the successor Ford Administration made Japanese defense efforts a central focus of U.S. policy.

The Carter Administration

The initial plans of the Carter Administration included a continuation of the reduction of the U.S. presence in Asia. The Administration also moved to reduce the cost of supporting U.S. forces in Japan. In 1978, the Japanese government agreed to pay for the construction of new housing, revitalization of older housing, and installation of infrastructure facilities on and near U.S. bases. Japan also agreed to assume a larger portion of the expenses of Japanese employed by American forces in Japan. In FY78 these expenditures amounted to around $590 million; they had risen to about $1 billion in FY80, accounting for about 40% of the cost of maintaining U.S. forces in Japan.

In the wake of the Soviet invasion of Afghanistan and the Iran crisis, Japanese defense efforts became the focus of even more attention. The Carter Administration put more pressure on the Japanese to increase defense spending than had any previous American administration. Administration officials had hoped that the pressure would results in at least a 9.7% increase in the FY81 defense budget. When Japanese budget plans were announced late in 1980 only a 7.6% increase was included and the Carter Administration made its disappointment clear to Tokyo. (Japanese defense expenditures have increased on the average of 7% per annum in real terms over the past decade.)

The Reagan Administration lobbied throughout 1981 to encourage Japan to expand its concept of defense responsibilities and to increase defense spending. On Dec. 21, Secretary of Defense Weinberger, in an interview for broadcast in Japan, urged the Japanese to take over the defense of Pacific sea lanes and air space in a zone extending 1,000 miles from Japan's coasts. On Dec. 28, apparently responding to American pressure, the Japanese cabinet announced that defense outlays for the year beginning Apr. 1, 1982, would be increased by 7.8%. The increase comes at a time when the government led by Zenko Suzuki is attempting to reduce government deficit spending. The Pentagon said that the increase "represents an important first step toward obtaining meaningful self-defense capabilities." But, even with the increase, Japan will still be spending less than 1% of its GNP on defense.

Measuring Defense Efforts: Opposing Concepts

There is no one way of measuring contributions to Western security. The very selection of measuring devices depends heavily on subjective considerations that can vary according to differing national historical experiences, threat perceptions, world roles, ideological assumptions, and concepts of security. Furthermore, there are a number of more technical questions associated with attempts to compare defense efforts. For example, some items, such as the expense of military retirement programs, are included in some defense budgets while they are excluded from others.

Finally, there is the major question of whether the most appropriate measures are those which assess inputs (defense spending) or outputs (capabilities of the forces resulting from defense programs). A variety of tables are included in this report as appendices which portray comparative input measures of defense efforts. Output measures are much more difficult to quantify.

American Perspectives

Over the years, American observers have used a great variety of arguments to buttress the case for increased allied defense expenditures. The following arguments have been among the most prominent:

-- By all quantitative measures of expenditures, the United States spends more on defense than its allies. In 1981, the United States spent more on its defense budget than the European allies and Japan combined.

-- U.S. strategic forces, which would be essential for U.S. national security even if the United States were not committed to participate in European and Japanese defense, nonetheless are the ultimate guarantee of Western security and are essential to allied security.

-- U.S. global military commitments contribute to Western security. The global U.S. naval role, in particular, makes a direct contribution to the security of Western Europe and Japan to the extent that it protects Western maritime trade and access to vital raw materials, oil in particular. Military efforts in the Persian Gulf region are of increasing importance and expense to the United States.

-- A major U.S. role in the defense of Europe and Japan was warranted when our allies were weak economically with fragile political structures, but the economic and political maturity of the allies now suggests that they should play an increasingly more responsible role in their own defense.

-- Under the protective shield of the United States, European countries and Japan have been able to modernize their industrial plant. The U.S. industrial plant is on average considerably older than that of Europe and Japan, contributing to a competitive advantage for our allies in international trade.

-- The increased threat of Soviet aggression warrants large increases in defense spending. If the United States is going to make sacrifices to take the lead in this effort, the Europeans and Japanese should be willing to follow. (A variation of this theme, more popular with those who would like to limit the extent of increased U.S. defense spending, is that the allies should take on additional burdens so that the U.S. increases can be kept within tolerable limits.)

Allied Perspectives

The allies respond to such criticisms from the United States with a variety of arguments. Those arguments include:

-- The United States is overreacting to the threat. The Soviets have in fact been weakened by Afghanistan and the events in Poland. They will not be tempted to attack Western Europe or Japan if already planned improvements in Western defenses are made.

-- The allies have consistently increased defense spending in the last decade while the United States was reducing its efforts. The results of these efforts (as detailed by the so-called "Eurogroup" in NATO) include:

Expenditure. In 1981, Eurogroup countries contributed about $80 billion to NATO's total defense expenditure. Of this total (which does not include France), some $18.5 billion was spent on capital equipment. During 1970-78 their real spending rose an average by about 2% per year over and above inflation so that, by the end of the 1970s, NATO Europe had taken on a proportionately greater share of the common defense burden then it carried 10 years earlier.

Force Levels. Of the ready forces currently available in Europe, about 91% of the ground forces and 86% of the air forces come from European countries, as do 75% of NATO's tanks and more than 90% of its armored divisions.

Manpower. The size of the armed forces of European countries amounts in peacetime to some 3 million, rising to nearly 6 million when reserves with an assigned role in mobilization are included. North American figures are 2.15 million, rising to 3 million.

Capital Expenditure. Several European countries devote as high a proportion of their expenditure to improving the quality and quantity of their military equipment as do north American allies. Land force improvements in 1982 will include the introduction of some 400 main battle tanks, together with 850 other armored vehicles; 1,400 anti-armor missile systems will come into service, plus 2,500 hand-held rocket launchers and 400 other anti-armor weapons. Maritime improvements will include the deployment of 27 new ships and 4 submarines. Air Force improvements will include over 220 new combat aircraft.

-- Some allied contributions to Western defense cannot be measured in terms of defense expenditures alone. West Germany, for example, contributes much real estate to the support of NATO forces. The costs of foregoing other "productive" uses of that real estate and of lost tax revenues are substantial.

-- Scandinavian approaches to defense cannot be understood without reference to the tradition of small standing forces combined with far more extensive civilian participation in national defense than is the case in the United States.

-- Many Europeans and Japanese agree that their countries should "do more." But even among these observers, there are differences concerning what policy tools most effectively enhance security. Factors often mentioned in addition to military forces as vital components of national security include: domestic economic strength; an effectively functioning political and social system; energy conservation and development of alternative energy sources; foreign aid, arms control efforts; effective diplomacy and the use of international organizations; and so forth.

-- The quality of allied manpower is higher than that in the U.S. military, particularly in countries which still conscript forces.

-- Both Britain and France continue to maintain strategic nuclear forces which enhance the deterrence effect of U.S. capabilities.

-- West Germany has reached the limit on armed forces manpower which was set after World War II. Growth beyond this limit could provoke a strong Soviet reaction and could be destabilizing to relations among West European countries as well. In the case of Japan, sudden increases in its defense efforts could produce political tremors throughout Asia.

-- Over the last 30 years, the allies have purchased far more military equipment from the United States than the United States has purchased from allied arms manufacturers. U.S. industrial profits, employment, and balance of payments have all benefited from this fairly one-sided trade.

Technical Problems with Measuring

As if the political problems were not sufficiently complex, there are in addition a number of technical difficulties that make measuring appropriate shares of the Western defense burden difficult. These include problems associated with fluctuating currency exchange rates, differing national approaches to defense budgeting, and the fact that no quantitative measures effectively measure the quality or will of military forces. Some of these technical problems have been discussed in a CRS report entitled "NATO after Afghanistan", published in October 1980 by the House Committee on Foreign Affairs.

Thus, determining what is an equitable sharing of alliance burdens is, ultimately, a subjective political process. There is no scientific formulation for determing objectively correct shares or cost/benefit relationships. Self-interest naturally dictates that U.S. officials should try to get the allies to do whatever will relieve the defense burden confronting the American people. Similarly, European and Japanese officials see it as their responsibility to pursue defense spending policies consistent with their political mandates and responsibilities.

Options for Congress

General Policy Approaches

A number of policy approaches are theoretically available for the U.S. Administration and the Congress, most of which have been attempted or implemented at one time or another since World War II. If a policy maker has decided that, in principle, the allies should "do more," there remain a number of further decisions. First, what is the overarching national interest involved? And second, what legislative devices are available to obtain the desired result?

First, at the level of "high" policy, the choice of approaches depends on the value attached to alliance relationships by the participants in the "transoceanic bargain." The U.S. contribution to NATO defenses and to Japanese security is perceived by the governments of all the NATO allies and Japan as a vital element of their national security. They therefore want the contribution to continue, a fact which creates a certain amount of "leverage" which the United States can use to influence Allied policies and defense spending.

But the value that American observers attach to our alliance relationships also conditions the selection of policy approaches. Those who see little self interest in U.S. defense commitments to Europe and Japan would likely be willing to risk far more acrimony in the relationships, possibly going far enough to rupture traditional ties to allies who do not respond. If one believes that there is no compelling political or military rationale, in terms of U.S. interests, for the presence of sizable contingents of U.S. forces in Europe and in Japan, then the threat of withdrawal of these forces is a credible source of leverage. Either the allies would put out more or the United States would withdraw forces. In either case, the burden of military expenditures carried by the United States could in theory be reduced.

On the other hand, those who see basic commitments to the defense of Europe and Japan as clearly beneficial to U.S. interests would presumably want to work within the context of these commitments to encourage larger allied contributions to Western security. The United States still retains leverage based on European and Japanese desires to preserve the American commitment, but once it is accepted that the U.S. commitment derives from self interest rather than from any sense of charity, there are some constraints on the levers available to pressure the allies. The risks of rupturing the alliance relationship are greatly reduced under this assumption, and, for better or worse, the possibilities for fundamental changes in the relationship are diminished. Since World War II, this approach has generally characterized U.S. policy toward the defense efforts of its allies.

It should also be mentioned that not all observers would recommend that the same burden sharing approaches be applied to Japan as to Western Europe. Some observers would argue that the West European countries have much less room for future growth in defense spending than does Japan. Others would argue that while Japan's economic strength would appear to permit substantial growth in defense efforts, it would not be in the U.S. interest to encourage such growth. These differing positions are based essentially on political and geostrategic considerations, and they could play a significant part in any U.S. debate on burden sharing policies.

After determining the general framework in which burden sharing initiatives are to be placed, it is important to decide exactly what the allies should be encouraged to do. There are two general approaches, not necessarily mutually exclusive, which have historically been part of U.S. policy toward allied defense efforts. One approach is to ask the allies to increase their direct contributions to Western security efforts. In general this means increasing defense spending and adding men, weapons, and missions to their current force planning. This approach has dominated policies of consecutive administrations since the enunciation of the Nixon Doctrine in 1969.

Another general approach that has also influenced past U.S. policy has been to concentrate on getting the allies to offset, in one form or another, the financial burdens on the United States of U.S. contributions to their security. This approach appeals particularly to those who feel that U.S. contributions to the alliance relationship benefit the allies more than they do U.S. interests. Support for policies along these lines has come to the fore more clearly when the United States was under severe economic pressure, such as during the balance of payments difficulties of the 1960s. But this approach has also been seen consistently as a tool for helping to "fine tune" the balance between costs and benefits of alliance relationships. It has appealed to many because of the visibile and tangible nature of a payment from another country to whose security the United States it is making a vital contribution.

Legislative Approaches

The Reagan Administration has continued to concentrate on encouraging the allies to improve their defense efforts, with a secondary focus on arrangements which reduce the costs to the U.S. of its forces stationed in West European countries and Japan. The Administration clearly wants the allies to increase their defense efforts, when possible, beyond the goal of 3% real growth However, the Administration has de-emphasized the use of "artificial" measures of defense efforts, such as the 3% guideline. In place of high visibility public pressure on the allies, it is working through normal NATO channels to encourage improvements on the "output" side of defense efforts. This approach was confirmed at the NATO summit in Bonn in June 1982.

The Congress, in this case, has available a wide range of options to oppose, modify, or support this approach. Its powers derive both from the defense authorization process and from congressional oversight responsibilities.

There are clearly two extreme options available which would not be compatible with the approach apparently being pursued by the Reagan Administration. At one extreme, the Congress could explicitly threaten substantial reductions of U.S. forces stationed in Western Europe and Japan if the allies did not increase defense efforts in proportions deemed acceptable by the Congress. (This approach has become more popular in the last year. A number of Members of Congress have expressed frustration with European and Japanese policies and have suggested that current levels of American commitments to defense of these countries may no longer be warranted.) At the other extreme, the Congress could judge that irrespective of European and Japanese efforts, U.S. commitments to European and Asian defense should be sustained and improved because it is in the self interest of the United States that we do so. Between these two extremes, there are a number of alternative approaches, all of which could be seen as either modifying or supporting the approach of the Administration.

The Congress cannot "require" the allies to increase defense efforts. The Congress can, however, require the Administration to take actions to increase pressure on the allies or can provide the Administration levers to use vis-a-vis the allies. The most direct approach is through the defense authorization process. Amendment of authorization bills has been used in the past to deny in the past to deny funds for activities that the Congress decided should more appropriately be funded by an ally. For example, the FY82 authorization bill on military construction killed a $6.4 million authorization to harden logistical facilities for tactical aircraft in Europe on the ground that NATO as a whole should pay these expenses.

Even if the threat of massive troop withdrawals is foregone as too extreme, some Members of Congress might want to use the threat of marginal reductions as a means of pressuring the allies to improve their own defense efforts, to contribute more to the cost of the U.S. presence, or both. The so-called Jackson-Nunn Amendment to the 1974 DoD Authorization Act was such an approach. The allies, in that case, met the requirements and no troops were withdrawn.

An updated version of the Jackson-Nunn approach emerged in the Senate floor debate on the FY82 DoD procurement authorizations. During the debate, Senator Eagleton proposed an amendment which would have required cutting U.S. force levels or monies expended in NATO countries which failed to meet the objective of 3% real increases in defense expenditures in 1982. A similar provision would have applied to Japan, requiring accelerated completion of Japan's mid-term defense plan. In both cases, the President could waive the requirement by certifying in writing to the Congress that such waiver was warranted by potential adverse effects on U.S. national security. The Senator withdrew the amendment following floor discussion during which Senator Tower, Chairman of the Armed Services Committee, assured that the committee would continue to keep close watch on European and Japanese defense efforts.

Approaches similar to those just discussed seek to employ very strict legislative requirements to force actions by the Administration which have direct effect on the allies. Other approaches that allow the executive branch somewhat more leeway in its dealings with the allies fall more in the oversight category. The allied commitments amendment to the FY81 DoD authorization legislation expressed the sense of the Congress that in light of the Soviet invasion of Afghanistan, instability in the Persian Gulf region, and the need for the United States to devote more defense resources to protecting Western supplies of oil, the allies should contribute more to Western defense efforts. The amendment also used another device available to the Congress when it required that the administration report to the Congress on the success of efforts to obtain allied defense improvements. The legislation also urged the administration to seek negotiated increased host support for the costs of stationing U.S. troops abroad.

Additional requirements for reports from the Administration can be envisioned to assist the Congress in evaluating allied defense efforts and American contributions to Western security.

Further, in the oversight area, congressional hearings and "sense of the Congress' resolutions can be used as a means of expressing congressional intent and calling attention to issues in the burden sharing area.

Ultimately, the viability of any approach to burden sharing is dependent on the likely reaction of the allies. There are significant political constituencies in most allied nations which support the alliance with the United States but disagree with U.S. assessments concerning the nature and extent of the threat and therefore disagree with the U.S.-recommended remedy. There are also significant political consituencies which agree that their country should be devoting more to defense.

If the United States wants to encourage increased defense efforts while simultanteously sustaining a broad base of support for the alliance in Western Europe and Japan, then policies must be designed with great sensitivity to the political and economic circumstances in the allied countries. Forms of pressure that produce friction but no increases in defense efforts would, from this perspective, be counterproductive for U.S. interests.

LEGISLATION

H.Con.Res. 74 (Pease et al.)

Urges the President to call on Japan and NATO to increase defense commitments in 1981. Introduced Feb. 23, 1981; referred to the Committee on Foreign Affairs, Subcommittees on Asian and Pacific Affairs, on Europe and the Middle East, and on International Security and Scientific Affairs.

H.Con.Res. 335 (Whitehurst)

Identical to S.Con.Res. 88. Introduced on May 6, 1982; referred to Committee on Foreign Affairs.

H.Con.Res. 210 (Neal)

Expresses the sense of the Congress that the President of the United States should seek to negotiate an agreement with the Government of Japan, whereby that nation would pay an annual "security tax" to the U.S. Government equal to 2% of Japan's annual gross national product, to more equitably compensate the United States for expenditures related to carrying out the provisions of the United States/Japanese Treaty of Mutual Cooperation and Security, and for the security of the free world. Introduced Oct. 28, 1981; referred to the Committee on Foreign Affairs.

H.Res. 377 (Schroeder et al.)

Expresses the sense of the House of Representatives that a substantial reduction of U.S. forces stationed in Europe can be made without adversely affecting the U.S. commitment under the North Atlantic Treaty. Introduced Mar. 4, 1982; referred to Committee on Foreign Affairs. Referred to Subcommittees on International Security Affairs and on Europe and the Middle East.

S.Con.Res. 46 (Levin)

Urges Japan to increase defense spending to at least 1% of

Introduced Nov. 9, 1981; referred to the Committee on Foreign Relations.

S.Con.Res. 88 (Roth et al.)
Expressing the sense of the Congress that the member countries of the North Atlantic Alliance must pool their resources for their common defense. Introduced May 3, 1982; referred to Committee on Foreign Relations.

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OFFICIAL NATO DATA ON DEFENSE EXPENDITURES OF NATO COUNTRIES

1949-1981

The figures given in Table II represent payments actually made or to be made during the course of the calendar year. They are based on the NATO definition of defense expenditures. In view of the differences between this and national definitions, the figures shown may diverge considerably from those which are quoted by national authorities or given in national budgets.

The figures relating to the United States and Canada include expenditures for military aid programs. The figures shown for European NATO countries do not include the value of end-items received under military aid programs from the United States and Canada.

France is a member of the Alliance without belonging to the integrated military structure; the relevant figures are indicative only.

TABLE I -- JAPAN

JAPANESE DEFENSE EXPENDITURE AND MILITARY MANPOWER 1975-1981 (a)

	1975	1979	1980	1981
$ Million	4,620	10,083	8,960	11,497
$ Per Head	42	87	75	98
% of Government Spending (b)	6.6	5.4	4.7	5.0
% of GNP (c)	0.9	0.9	0.9	--
Numbers in Armed Forces (000)	236.0	241.0	241.0	243.0
Est. Reservists (d) (000)			39.6	41.6

Notes:

(a) Source: The Military Balance, 1981-82, International Institute for Strategic Studies, London, pp. 112-113.

(b) This series is designed to show national trends only; differences in the scope of the government sector invalidate international comparisons.

(c) Based on local currency. GNP estimated where official figures unavailable.

(d) The difficulty of calculating suitable exchange rates makes conversion to dollars imprecise.

TABLE II

TOTAL DEFENSE EXPENDITURES OF NATO COUNTRIES
(Current Prices)

Country/Area and Currency Unit in Millions	Actual						Forecast
	1949	1954	1970	1978	1979	1980	1981
Belgium - Belgian Francs	8,273	20,707	37,388	99,726	106,472	115,754	124,055
Canada - Canadian $	372	1,771	2,061	4,662	4,825	5,355	6,150
Denmark - Danish Kroners	360	885	2,757	7,250	7,990	9,061	--
France (a) - Francs	4,787	11,710	32,672	'5,175	96,439	111,672	129,365
Germany (b) - DM	--	6,287	22,573	43,019	45,415	48,518	52,298
Greece - Drachmae	1,630	3,428	14,208	77,861	89,791	96,975	125,944
Italy - Lira	301	543	1,562	5,301	6,468	8,203	9,850
Luxembourg - Luxembourg Francs	112	565	416	1,154	1,242	1,534	1,727
Netherlands - Guilders	680	1,583	3,909	9,146	10,106	10,476	11,279
Norway - Norwegian Kroners	370	1,141	2,774	6,854	7,362	8,242	9,447
Portugal - Escudos	1,419	2,100	12,538	27,354	34,343	43,440	51,774
Turkey - Liras	556	934	6,237	66,239	93,268	185,656	313,067
United Kingdom - § Sterling	779	1,569	2,444	7,616	9,029	11,503	12,418
United States - US $	13,503	42,786	77,854	109,247	122,279	143,981	167,764
NATO Europe (c) - US $	4,838	11,756	24,464	76,692	92,193	107,595	--
Total North America - US $	13,875	44,557	79,821	113,334	126,398	148,560	172,560
Total NATO (c) - US $	18,713	56,313	104,285	190,026	218,591	256,155	--

Notes:

(a) - France is a member of the Alliance without belonging to the integrated military structure; the relevant figures are indicative only.

(b) - Before it acceded to the North Atlantic Treaty Organization (May 1955), Germany contributed to the defense budgets of certain NATO countries by the payment of occupation costs; moreover, it bore certain other costs which also fall within the NATO definition of defense expenditures. In addition to defense expenditures (NATO definition), the German authorities are obliged to incur large annual expenditures for Berlin owing to the exceptional situation of this city and the need, in the interests of the defense of the free world, to ensure its viability. These expenditures, which are not included in the figures given above since they do not come within the NATO definition, are forecast to be 12,861 million DM in 1980.

(c) - These totals are based on the currency exchange rates in force during the years concerned. This means that the trends shown are affected, to varying degrees, by the changes which have taken place in national exchange rates against the U.S. dollar. Direct comparisons between figures for different years must therefore be made with caution, the more so because, due to the impact of price and salary increases, the figures on this table give only an imperfect view of the real trend in the defense effort of countries.

TABLE III

NATO DEFENSE EXPENDITURES AS PERCENTAGE OF GROSS DOMESTIC PRODUCT IN PURCHASERS' VALUES

Country	Average 1970-1975	1976	1977	1978	1979	1980	1981 (e)
Belgium	2.9	3.1	3.1	3.3	3.3	3.3	3.3
Denmark	2.3	2.2	2.2	2.3	2.3	2.4	--
France (a)	3.8	3.8	3.9	4.0	4.0	4.1	4.2
Germany (b)	3.5	3.5	3.3	3.3	3.3	3.3	3.4
Greece	5.3	6.9	7.0	6.7	6.3	5.6	5.9
Italy	2.6	2.3	2.4	2.4	2.4	2.4	2.5
Luxembourg	0.8	1.0	1.0	1.0	1.0	1.2	1.3
Netherlands	3.1	3.0 (e)	3.3	3.1	3.2	3.1	3.2
Norway	3.2	3.1	3.1	3.2	3.1	2.9	2.9
Portugal	6.5	4.0	3.5	3.5	3.4	3.6	3.6
Turkey	4.7	6.1	5.8	5.2	4.3	4.3	4.8
United Kingdom	5.0	4.9	4.7	4.6	4.7	5.1	5.0
NATO Europe	3.7	3.7	3.6	3.6	3.6	3.7	--
Canada	2.0	1.9	1.9	2.0	1.8	1.8	1.8
United States	6.2	5.3	5.3	5.1	5.1	5.6	5.8
Total NATO	4.9	4.4	4.4	4.3	4.2	4.4	--

Notes:

(a) France is a member of the Alliance without belonging to the integrated military structure; the relevant figures are indicative only.

(b) These percentages have been calculated without taking into account the expenditures on Berlin (see Note b., Table II); if these expenses were included, the percentage would be as follows:

1976:	4.3	1978:	4.1	1980:	4.1
1977:	4.1	1979.	4.1	1981:	4.3

-- Information not available

(e) Estimate

TABLE IV-A

GROSS DOMESTIC PRODUCT IN PURCHASERS' VALUES AND DEFENSE EXPENDITURES PER CAPITA, IN US $ (a)

	Gross Domestic Product Per Head	
Country	1980	1981 (e)
Belgium	11,555	11,539
Denmark	12,792	12,763
France	10,814	10,846
Germany	12,592	12,574
Greece	4,111	4,122
Iceland	10,965	10,776
Italy	5,916	5,850
Luxembourg	11,455	11,100
Netherlands	11,159	11,026
Norway	11,872	11,911
Portugal	2,158	2,211
Turkey	1,570	1,584
United Kingdom	7,168	7,059
NATO Europe	8,014	7,958
Canada	9,594	9,787
United States	10,352	10,511
Total NATO	9,000	9,042

Notes:

(a) All figures are expressed in 1979 prices; the national currencies have been converted into US $ on the basis of the average exchange rates for 1978; since then, further changes in exchange rates have occurred and a certain amount of caution should be exercised in making comparisons.

-- Information not available.

(e) Estimate.

TABLE IV-B

GROSS DOMESTIC PRODUCT IN PURCHASERS' VALUES AND DEFENSE EXPENDITURES PER CAPITA, IN US $ (a)

	Defense Expenditures Per Head					
Country	1976	1977	1978	1979	1980	1981 (e)
Belgium	331	339	361	369	376	376
Denmark	278	286	297	297	298	298
France	375 (b)	396 (b)	415 (b)	424 (b)	438 (b)	453
Germany	398 (c)	397 (c)	410 (c)	417 (c)	423 (c)	438
Greece	254	264	266	256	231	243
Iceland	--	--	--	--	--	--
Italy	127	132	134	137	143	141
Luxembourg	108	105	113	116	135	145
Netherlands	333	368	348	359	351	362
Norway	324	327	351	357	362	371
Portugal	74	68	69	71	78	79
Turkey	68	69	68	68	68	68
United Kingdom	347	339	336	342	352	359
NATO Europe	272	277	281	286	291	297
Canada	173	177	177	174	178	182
United States	528	526	530	543	564	591
Total NATO	368	370	375	383	394	409

Notes:

(a) All figures are expressed in 1979 prices; the national currencies have been converted into US $ on the basis of the average exchange rates for 1978; since then, further changes in exchange rates have occurred and a certain amount of caution should be exercised in making comparisons.

(b) France is a member of the Alliance without belonging to the integrated military structure; the relevant figures are indicative only.

(c) These figures have been calculated without taking into account the expenditures on Berlin (see Note b., Table II); if these expenses were included, the figures would be as follows: US $ 475 for 1976, US $ 476 for 1977, US $ 490 for 1978, US $ 506 for 1979, US $ 517 for 1980, and U.S. $537 for 1981.

TABLE V

EQUIPMENT EXPENDITURES AS PERCENTAGE OF TOTAL DEFENSE EXPENDITURES

(Fiscal Years) (a)

Country	Average 1971-1975	1976 or 1976/77	1977 or 1977/78	1978 or 1978/79	1979 or 1979/80	1980 or 1980/81	1981 or 1981/82 (e)
Belgium	9.6	11.0	11.9	13.9	13.1	14.4	15.8
Canada	6.8	8.0	8.5	10.0	13.8	15.4	15.8
Denmark	17.7	19.4	21.8	16.4	16.3	18.3	17.0
Germany	11.8	13.2	12.5	13.0	13.7	14.8	17.0
Greece	13.5	20.3	20.3	18.1	17.7	18.8	19.5
Italy	15.0	13.1	15.3	16.2	15.1	17.5	17.7
Luxembourg	1.4	3.4	2.0	1.7	2.1	1.8	2.3
Netherlands	13.2	15.5	20.9	18.3	20.2	18.0	19.1
Norway	12.4 (c)	11.4 (c)	14.2 (c)	17.2 (c)	19.5	19.3	16.1
Portugal	5.2	2.9	2.1	1.8	3.8	6.1	6.6
Turkey	12.6	28.5	21.9	18.5	9.1	4.7	6.4
United Kingdom	18.1	20.6	22.0	23.0	23.2	25.2	25.1
United States	19.6(b)	17.4	17.5	20.0	19.5	20.3	19.7

Notes:

(a) Calendar year for all countries except for Canada and the United Kingdom (Fiscal Year: April-March); Denmark (Fiscal Years 1975/76-1977/78: April-March; Fiscal Year 1978: April-December; Fiscal Year 1979 onwards: January-December); Turkey (Fiscal Year: March-February) and the United States (Fiscal Year 1975/76: July-June; Fiscal Year 1976/77 onwards: October-September).

(b) Including ammunition and explosives.

(c) Excluding missiles.

-- Information not available.

(e) Estimate..

TABLE VI-A

ARMED FORCES

Military Only (thousands)

Country	1976	1977	1978	1979	1980	1981 (e)
Belgium	107	107	109	107	108	109
Denmark	31	32	33	33	33	32
France (a)	585	584	581	578	575	575
Germany	493	495	491	492	490	495
Greece	186	186	186	187	186	186
Italy	455	475	489	491	500	505
Luxembourg	1	1	1	1	1	1
Netherlands	106	103	106	107	107	107
Norway	39	39	40	40	40	40
Portugal	83	79	82	81	88	90
Turkey	675	771	721	698	717	741
United Kingdom	337	326	320	324	330	331
NATO Europe	3,098	3,198	3,159	3,139	3,175	3,212
Canada	78	79	79	79	82	82
United States	2,075	2,060	2,033	2,050	2,075	2,120
Total NATO	5,251	5,337	5,271	5,268	5,332	5,414

Notes:

(a) France is a member of the Alliance without belonging to the integrated military structure; the relevant figures are indicative only.

(e) Estimate.

TABLE VI-B

ARMED FORCES

Total Armed Forces (b) as % of Total Labor Force

Country	1976	1977	1978	1979	1980	1981 (e)
Belgium	2.9	2.8	2.9	2.8	2.8	2.8
Denmark	1.6	1.6	1.6	1.6	1.6	1.6
France (a)	3.2	3.2	3.1	3.1	3.1	3.0
Germany	2.6	2.6	2.5	2.5	2.5	2.5
Greece	6.5	6.5	6.5	6.4	6.2	6.2
Italy	2.4	2.4	2.5	2.4	2.4	2.4
Luxembourg	0.8	0.8	0.9	0.8	0.8	0.8
Netherlands	2.7	2.7	2.7	2.7	2.7	2.7
Norway	2.8	2.7	2.7	2.6	2.6	2.6
Portugal	2.2	2.1	2.2	2.2	2.3	2.3
Turkey	4.4	4.9	4.5	4.3	4.3	4.4
United Kingdom	2.4	2.3	2.2	2.2	2.2	2.1
NATO Europe	2.9	3.0	2.9	2.8	2.8	2.8
Canada	1.1	1.1	1.1	1.0	1.0	1.0
United States	3.2	3.1	2.9	2.9	2.9	2.9
Total NATO	2.9	2.9	2.8	2.8	2.8	2.8

Notes:

(a) France is a member of the Alliance without belonging to the integrated structure; the relevant figures are indicative only.

(b) Military and civilian personnel.

(e) Estimate.

DEBATE PROPOSITION THREE

Resolved: That the United States Should Significantly Curtail Its Arms Sales to Other Countries

Arms and weaponry have been in international trade virtually as long as nations have existed. Following World War I, the term "merchants of death" came into use when some writers concluded that profit-seeking armaments manufacturers had contributed to the outbreak of that costly conflict. In World War II, the United States became "the Arsenal of Democracy", supplying weapons and munitions to the Allies against the Axis. In this century, debate over the proper role, if any, of the arms trade as an instrument of foreign and defense policy has never really abated. The materials in this section include statements of current U.S. policy, past policies which have attempted to limit or at least define the U.S. role as arms seller, critiques of the policies chosen and their effectiveness, data on the worldwide arms trade, U.S. domestic legislation relating to arms sales, and the impact of arms sales on purchaser and seller nations.

ARMS TRANSFERS AND THE NATIONAL INTEREST*

Following are selected portions of an address by James L. Buckley, Under Secretary of State for Security Assistance, Science, and Technology, before the Aerospace Industries Association in Williamsburg, Virginia, May 21, 1981.

I am delighted to be with you today in this superb setting. Some of the great debates defining the goals of what was to be the American Revolution took place here in Williamsburg. The seeds sown here and elsewhere along the Atlantic seaboard took root and produced the greatest experiment in human freedom the world has ever witnessed.

This new republic, which the patriots who walked the streets of Williamsburg two centuries ago helped design, has evolved into a great and powerful nation. We are no longer merely the world's foremost example of the blessing that freedom brings; but of historical necessity, we are now the primary guardians of the very concepts of individual freedom and the inherent dignity of man on which this country was founded and from which it continues to draw its strength.

We Americans have never sought the responsibilities of world leadership, but we cannot avoid them or the burdens they impose on us. Irving Kristol described our obligations as a great power in an essay written in 1967 when some in the United States were beginning to call for a withdrawal from Vietnam, a reduction in our foreign commitments, and a return to "Fortress America." With a provocative reference to the United States as an "Imperial Power," Kristol wrote:

> "There are a great many people who appear to think that a great power is only the magnification of a small power, and that the principles governing the actions of the latter are simply transferable—perhaps with some modification—to the former. In fact, there is a qualitative difference between the two conditions, and the difference can be summed up as follows: A great power is 'imperial' because what it does *not* do is just as significant, and just as consequental, as what it does. Which is to say, a great power does not have the range of freedom of action—derived from the freedom of inaction—that a small power possesses. It is entangled in a web of responsibilities from which there is no hope of escape; and its policy-makers are doomed to a strenuous and unquiet life."

AMERICAN LEADERSHIP

Nothing worthwhile in the world community is possible—neither economic growth nor political or social reform—in an atmosphere of increasing instability. And there is little reason to assume that the decade of the 1980s will witness a basic change in this situation, unless the United States is prepared to meet the security needs of its friends and allies as well as its own. Military power alone cannot solve the large array of problems which currently beset the community of nations; nor can it provide the foundations for an international society in which equity and security prevail. What it can do, given the growing disorder that we confront today, is help to reestablish some sense of equilibrium.

All of this will require the best of American leadership abroad and at home. We must not only demonstrate that we have the will to lead but the capacity to back that will with the necessary military and economic power. This will require the revitalization of our defenses and the building of stronger alliances and cooperative relationships as well as the rebuilding of our own economic strength. This is why the adoption of the President's economic program is as essential to our ultimate national security as the increased requests for defense and security assistance appropriations.

My own responsibilities are focused on the last, so I would like to take the time to describe some of the attitudes and policies that I expect will be applied to the sale of weapons and related goods and services. These and other related objectives are being spelled out in a policy statement that we expect will be released in the near future.

US ATTITUDES AND POLICIES

For starters, this Administration believes that arms transfers, judiciously applied, can complement and supplement our own defense efforts and serve as a vital and constructive instrument of American foreign policy. In revising our practices in this area, we seek to achieve the following:

- Enhancement of the state of prepardness of our friends and allies;
- Revitalization of our alliances;
- The fashioning of more coherent policies and strategies that bear on East-West relations; and
- The buttressing of our own defense production capabilities.

Arms transfers can thus serve as an important adjunct to our own security by helping deter acts of aggression, by enhancing the self-defense capabilities of nations with which we share close security ties, and by facilitating access by American forces to military facilities abroad.

The Administration's new approach to arms transfers will emphasize the need for flexibility and rapid response to meet changing circumstances affecting American security interests. We will evaluate requests for support in terms of their contribution to deterrence and defense. We will accord high priority to requests from members of our major alliances and from those nations with which we have developed cooperative relationships.

ASSESSING REQUESTS

In assessing arms transfer requests, the United States will continue to give due consideration to such factors as the degree to which the equipment requested

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*As reported in *Current Policy No. 279*, US Department of State Bureau of Public Affairs, Washington, D.C., May 1981

Reproduced from U.S. Arms Control and Disarmament Agency. World military expenditures and arms transfers, 1970–1979. Washington, 1982. p. 15–17. (ACDA publication 112).

corresponds to the military threat facing the recipient, the manner in which such equipment will serve to maintain stability within regions where friends of the United States are on less than the best terms one with the other; and whether the proposed transfer can be absorbed by the recipient without overburdening its military support system or financial resources.

We believe that particular care must be taken to avoid an adverse impact on allied and friendly nations by encouraging them to assume burdens for which their economies are ill-prepared. For this reason, we are prepared to encourage the efforts of American manufacturers to produce equipment which, in terms of cost, complexity, and sophistication, is more appropriate to the needs of non-industrialized nations. At the same time, the United States will continue to strive with its NATO allies to achieve a high degree of equipment standardization in order to achieve our mutual goal of interoperability of equipment.

Recognizing, as we do, that in today's economic climate a number of nations cannot afford to purchase equipment on commercial terms, we are requesting congressional authority to help finance some such purchases at concessional rates. At the same time we are seeking other statutory provisions that will simplify procedures and achieve significant economies in the production and sale of items in high demand.

Requests for transfer for technologically sensitive materials will be considered on a case-by-case basis. Such transfer will not be approved if a significant possibility of compromise of sensitive information or equipment exists, or if justification on the basis of overriding US interest cannot be made. We will also give serious consideration to future requests for coproduction or coassembly, of military equipment produced by American manufacturers, while understanding the extreme complexity of this particular subject as well as the potential for conflict between foreign and domestic economic policy objectives. For this reason, I would particularly welcome your views as the Administration works to develop specific guidelines in the area of coproduction and coassembly.

Finally, as one of my first actions in this position, we rescinded the Carter Administration's so-called leprosy letter, which instructed US officials overseas not to assist US businessmen seeking to meet the military needs of friendly states. Henceforth, US Government representatives overseas will be expected to provide the same courtesies and support to firms that have obtained licenses to market items on the US Munitions List as they would to those marketing other American products. In due course we will be reviewing our licensing procedures to see how they can be simplified.

MULTILATERAL RESTRAINT

I know there will be those who will conclude that these new policy changes will herald a period of unrestrained military sales. They will not. We remain dedicated to the goal of mutual restraint in arms transfers. What we advocate is similiar dedication to the goal of serving US interests; and in those cases where arms transfers are the best means of doing so, we will make them. The difference between this Administration and its predecessor is in the perception of where those interests lie, how and by whom they are challenged, and how best to advance them.

This Administration starts with no illusions as to Soviet purposes. Soviet support for so-called wars of national liberation has never been qualified, even during the halcyon days of detente. It is, therefore, not surprising that there has been little or no interest in arms transfer limitations manifested by the Soviet Union—or, for that matter, by the majority of other arms producing nations.

We will, nonetheless, continue to examine ways to secure a regime of multilateral restraint. But in the meantime this Administration will face up to the realities of Soviet aggrandizement, and it will pursue a sober, balanced, and responsible arms transfer policy, one which is essential for the protection of our national security interests.

SECURITY AND COOPERATION

Which brings me to the last point I would like to make. Despite our inherent strength, there are limits to what we can accomplish alone. We are as dependent on the cooperation of other sovereign nations for the defense of our larger security interests as we are dependent on foreign sources for oil and such other strategic minerals as cobalt, manganese, titanium, chrome, and a host of others to support the high technology on which our economy is based.

The alliances and cooperative arrangements we need to forge with other nations cannot be coerced. They require of us a new maturity in our relationships with other nations, one that recognizes the sovereignty and dignity of other societies as well as the enormous diversity of cultures that exists among them. If we build our society relationships on the bedrock of mutual interests, then they will prove durable—provided always that we can once again restore confidence in the reliability of American undertakings.

We are the essential partner in any credible network of free world relationships because we are the only power that has the capacity to hold in check the aggressive opportunism of the Soviet enterprise. Our attempt in recent years to downgrade our world responsibilities has proven catastrophic for precisely the reason that only we are in a position to make the difference. As Irving Kristol pointed out in the essay I cited earlier: "It is the world situation—and the history which created this situation—that appoints imperial powers, not anyone's decision or even anyone's ambition. And power begets responsibility—and above all the responsibility to use this power responsibly."

That is our challenge: not to strip ourselves of power but to focus that power for the achievement for the common good. And that common good these days is to restore a world order in which each nation can work out its own destiny, free of fears of external threat. What we have to offer other nations as we seek to forge new and effective partnerships is the prospect of global stability in which the United States can be relied upon to use its influence and strength to protect the peace and require that rogue nations observe a code of behavior that eschews resorts to force or subversion in international affairs.

This is the stated objective of the Reagan Administration, and it is one that is based on the long overdue reaffirmation of our confidence in ourselves and in the rightness of our cause. We *are* the last best hope on Earth; and we have no responsible choice but to act accordingly.

CONVENTIONAL ARMS TRANSFER POLICY

On July 8, 1981, the President signed a directive on conventional arms transfer policy, which superseded Presidential Directive 13 of May 13, 1977. The text of the new arms transfer policy:

The challenges and hostility toward fundamental United States interests, and the interests of its friends and allies, have grown significantly in recent years. These trends threaten stability in many regions and impede progress toward greater political and economic development.

The United States cannot defend the free world's interests alone. The United States must, in today's world, not only strengthen its own military capabilities, but be prepared to help its friends and allies to strengthen theirs through the transfer of conventional arms and other forms of security assistance. Such transfers complement American security commitments and serve important United States objectives. Prudently pursued, arms transfers can strengthen us.

The United States therefore views the transfer of conventional arms and other defense articles and services as an essential element of its global defense posture and an indispensable component of its foreign policy. Applied judiciously, arms transfers can:

- help deter aggression by enhancing the states of preparedness of allies and friends;
- increase our own armed forces' effectiveness by improving the ability of the United States, in concert with its friends and allies, to project power in response to threats posed by mutual adversaries;
- support efforts to foster the ability of our forces to deploy and operate with those of our friends and allies, thereby strengthening and revitalizing our mutual security relationships;
- demonstrate that the United States has an enduring interest in the security of its friends and partners, and that it will not allow them to be at a military disadvantage;
- foster regional internal stability, thus encouraging peaceful resolution of disputes and evolutionary change; and
- help to enhance United States defense production capabilities and efficiency.

Attainment of these objectives in turn requires effective United States Government control and direction over arms transfers. Because of the diversity of United States security interests, this Administration will tailor its approach to arms transfer requests to specific situations and exercise sufficient flexibility to respond promptly to changes affecting the mutual interests of the United States and its allies and friends. We will review such requests with care.

The United States will evaluate requests primarily in terms of their net contribution to enhanced deterrence and defense. It will accord high priority to requests from its major alliance partners and to those nations with whom it has friendly and cooperative security relationships. In making arms transfer decisions the United States will give due consideration to a broad range of factors including:

- the degree to which the transfer responds appropriately to the military threats confronting the recipient;
- whether the transfer will enhance the recipient's capability to participate in collective security efforts with the United States;
- whether the transfer will promote mutual interests in countering externally supported aggression;
- whether the transfer is consistent with United States interests in maintaining stability within regions where friends of the United States may have differing objectives;
- whether the transfer is compatible with the needs of United States forces, recognizing that occasions will arise when other nations may require scarce items on an emergency basis;
- whether the proposed equipment transfer can be absorbed by the recipient without overburdening its military support system or financial resources; and
- whether any detrimental effects of the transfer are more than counterbalanced by positive contributions to United States interests and objectives.

All requests will be considered on a case-by-case basis. Those for coproduction, or the transfer of sensitive or advanced technology, will receive special scrutiny, taking into account economic and industrial factors for both the United States and other participating countries, the importance of arms cooperation with NATO and other close friends and allies, potential third party transfers, and the protection of sensitive technology, and military capabilities.

Particular care must be taken to avoid any adverse impact on allied and friendly nations by encouraging them to assume burdens for which their economies are ill-prepared. Therefore, careful consideration will be given to lower-cost alternatives including adaptations of military equipment for sale abroad, recognizing that first-line systems may not suit the needs of many countries. This consideration of the full range of available American alternatives will take place at every stage of review.

United States Government representatives overseas will be expected to provide the same courtesies and assistance to firms that have obtained licenses to market items on the United States Munitions List as they would to those marketing other American products.

The policy changes being initiated should not be seen as heralding a period of unrestrained military transfers. The United States retains a genuine interest in arms transfer restraint and remains prepared to consider specific proposals directed toward that end. There has been, however, little or no interest in arms transfer limitations manifested by the Soviet Union, or the majority of the other arms-producing nations. In the absence of such interest, the United States will not jeopardize its own security needs through a program of unilateral restraint. At the same time, recognizing

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Reproduced from U.S. Arms Control and Disarmament Agency. World military expenditures and arms transfers, 1970–1979. Washington, 1982. p. 13–14. (ACDA publication 112).

the special role that its major allies can play in strengthening common friends, it will seek to develop complementary policies with those allies.

The realities of today's world demand that we pursue a sober, responsible, and balanced arms transfer policy, a policy that will advance our national security interests and those of the free world. Both in addressing decisions as to specific transfers and opportunities for restraint among producers, we will be guided by principle as well as practical necessity. We will deal with the world as it is, rather than as we would like it to be.

Congressional Research Service
The Library of Congress

Washington, D.C. 20540

June 1, 1981

SUBJECT: State and Defense Agencies involved in Foreign Technology Transfer and Arms Transfer

Section 38 of the Arms Export Control Act authorizes the President to control the export of defense articles and defense services. The U.S. Munitions List, maintained by the Department of State, designates items that are considered defense articles. Export of these items is regulated under two systems: 1) Foreign military sales, i.e. government to government sales, handled primarily by the Defense Security Assistance Agency, and 2) Munitions licensing, i.e. commercial arms sales under license, handled by the Office of Munitions Control, Bureau of Politico-Military Affairs, Department of State.

The Nuclear Regulatory Commission has primary responsibility for nuclear export materials and the Department of Energy is responsible for nuclear technology transfer applications.

The control of export of other items and related technology is handled by the Office of Export Administration, Department of Commerce. Some exports controlled by this office concern militarily critical technologies or "dual use" items, those that have military as well as civil applications Licensing these exports requires the clearance of the Department of Defense as well.

This memorandum outlines the responsibilities of the primary offices of the Department of State and the Department of Defense concerned with arms transfers and the export of dual use commodity control items.

Department of State

The Office of Munitions Control, Bureau of Politico-Military Affairs, has primary responsibility for licensing commercial arms and technology exports. Controversial or sensitive cases are referred for review to the Under Secretary of Defense for Research and Engineering and the Defense Security Assistance Agency.

The Office of Security Assistance and Sales, Bureau of Politico-Military Affairs, has the responsibility of formulating policy and approving foreign military sales. It works in cooperation with the Defense Security Assistance Agency which administers foreign military sales.

Depending upon the nature of the arms sale, other State Department

bureaus and offices have input. For example, arms sales to Nicaragua might clear the Bureau of Inter-American Affairs and the Bureau of Human Rights and Humanitarian Affairs.

The Office of East-West Trade in the Bureau of Economic and Business Affairs is responsible for reviewing the export of critical technology control items to the communist world. The office also has policy responsibility for certain foreign policy control export items, e.g., crime control equipment to countries in gross violation of human rights.

The Office of Export and Import Control in the Bureau of Oceans and International Environmental and Scientific Affairs is responsible for clearing applications for the export of nuclear materials from the Nuclear Regulatory Commission and reviews nuclear technology transfer applications from the Department of Energy.

Department of Defense

Within the office of the Under Secretary of Defense for Research and Engineering, the Deputy Under Secretary for International Programs and Technology is responsible for preparing the official DOD position on all munitions licenses referred to DOD by State and for all critical technology export licenses referred to DOD by Commerce. Two offices under International Programs and Technology have major responsibilities.

The Office of Technology Trade defines critical technologies which have civilian and military applications and processes all export licenses referred by Commerce. The Office of Military Technology Sharing processes all munitions licenses referred to DOD by State. It is also responsible for assessing the implications of critical technology exports to the free world on a case-by-case basis.

The Under Secretary of Defense for Policy is also involved in the export of arms and dual use equipment and technology transfers. Responsiblities are divided between the Assistant Secretary of Defense for International Security Affairs (ISA) and the Assistant Secretary of Defense for International Security Policy (ISP), a position recently established to replace the Deputy Under Secretary for Policy Planning.

Under the direction of ISA, the Defense Security Assistance Agency has primary responsibility for administering the foreign military sales program

(FMS). It acts in response to requests from foreign governments for arms information and cost-data information. It processes these applications and manages FMS sales, credits, the International Military Education and Training Program (IMET), and grant military aid (MAP).

Within ISA is the Office of Technology and Arms Transfer Policy. This office has been responsible for the policy considerations of commercial munitions sales, East-West trade, and technology transfer. These responsibilities, however, are being shifted to ISP under a reorganization scheme nearing implementation. Under this scheme, the Office of Technology and Arms Transfer Policy would continue to exist with limited responsibilities.

The organization of ISP is awaiting the confirmation of the Assistant Secretary. It will likely include a new position, Deputy Assistant Secretary for Technology Trade and Economic Affairs with an office comprising three units. The first is proposed to assume the responsibilities of the Office of Technology and Arms Transfer Policy in ISA, i.e. it will deal with the policy aspects of technology transfer, commercial arms sales, and East-West trade. The second unit is proposed to have economic support responsibilities. The third unit is proposed to have defense mobilization responsibilities. It must be emphasized that this new organization has not yet taken effect nor have its details been approved.

The proposed organization of ISP would mean that it would absorb the policy planning aspects of ISA. ISP would coordinate with State and Commerce on East-West trade, arms sales, and the economic aspects of technology transfer. The Under Secretary of Defense for Research and Engineering will continue to handle the "nuts and bolts" of arms sales and technology transfer and ISA would continue to have responsibility for the management of the foreign military sales program. ISP would then handle the broadest political and economic policy aspects of these matters.

There is necessarily a large degree of interaction among the units outlined above. Technology and equipment export is further complicated if additional agencies or offices become involved, e.g. the Arms Control and Disarmament Agency or the National Aeronautics and Space Administration. This memorandum outlines only those units with primary responsibilities.

SECURITY ASSISTANCE PROGRAMS

There are five major security assistance programs through which the United States provides defense articles, military training, and other assistance and defense-related services to eligible foreign countries. These programs include the Foreign Military Sales (FMS) Financing Program, the Economic Support Fund (ESF) Program, the Military Assistance Program (MAP), the International Military Education and Training (IMET) Program, and the Peacekeeping Operations (PKO) Program. Also, as part of the FMS Financing Program this appendix discusses "Direct Credits Forgiven" and the Guaranty Reserve Fund. The Foreign Assistance Act (FAA) of 1961, as amended, (22 U.S.C. § 2151 et. seq.) is the primary implementing legislation, except for the FMS Financing Program which is authorized under the Arms Export Control Act (AECA) (22 U.S.C. § 2751 et. seq.).

On an annual basis, the executive branch submits to the Congress a program description, along with recommended program levels for each of the major programs. Many programs require congressional authorization and appropriation and, as such, have a direct impact on the budget. FMS guaranteed loans financed through the Federal Financing Bank (FFB) do not require appropriations and are therefore off-budget. Within each program, we identify the specific authorizing legislation, and the purpose, scope, and operations which apply to its conduct and administration. Following is a description of each program and, where applicable, the funds appropriated by country, on an annual basis since 1977.

FMS FINANCING PROGRAM

Sections 23 and 24 of the AECA authorize the President to help finance the purchase of defense articles and services by friendly foreign governments and international organizations. The FMS Financing Program consists of direct credit and guaranteed loans.

Funds for the Department of Defense (DOD) direct credit and guaranteed loans are authorized and appropriated annually by the Congress and, when repaid, are done so with interest and returned to the general account of the Treasury. Interest for credit sales is set by section 23 of the AECA at,

> " * * * a rate equivalent to the current average interest rate, as of the last day of the month preceeding the financing of such procurement, that the United States Government pays on outstanding marketable obligations of comparable maturity, unless the President certifies to Congress that the national interest requires a lesser rate of interest * * * ."

Reproduced from U.S. General Accounting Office. U.S security and military assistance: programs and related activities. [Washington] 1982.

Direct credit and guaranteed loans

Under direct credit, DOD finances procurement of defense articles out of funds specifically appropriated for AECA financing programs. In fiscal year 1982 only Israel and Egypt participated in the direct credit program. Special authority contained in section 31 of the AECA relating to debt forgiveness (see p. 15) releases Israel from repayment of $550 million and Egypt from repayment of $200 million authorized as part of their respective credit programs. The administration proposed that an additional 19 countries participate in the direct credit program for fiscal year 1983.

Under DOD's guaranteed loan program, loans are made by the FFB to the foreign government. The outstanding balance of the loan is "guaranteed" repayment by a special guaranty reserve established for that purpose. Some 32 countries are projected to participate in the fiscal year 1983 guaranteed loan program.

Usually, countries must repay loans within 12 years. However the AECA also authorizes special repayment terms for the Governments of Israel, Egypt, Sudan, Greece, Turkey, and Somalia. These countries generally are given a 30-year term--a 10-year grace period on repayment of principal, followed by 20 years repayment.

DIRECT CREDITS FORGIVEN

The FMS Financing Program is authorized under sections 23 and 24 of the AECA. Under the Act, the President can authorize direct credit or guaranteed loans to help foreign governments and international organizations purchase U.S. defense articles and services. The Act also allows the United States to forgive repayment of credit sales and guaranteed loans to certain countries.

Over the years, the bulk of direct credits have been provided to Israel, and more recently Egypt. Since 1977, Israel has received at least $500 million a year in FMS direct credits. More significant though, as the following table shows, Israel has been relieved from repayment of this debt to the United States. 1/ Recently, repayment of Egypt's direct credits were forgiven; and Egypt and Sudan are also seeking debt forgiveness for fiscal year 1983.

1/Direct credits were first forgiven for Israel in FY 1974; from FY 1974 through FY 1976 $2.4 billion in direct credits were forgiven.

GUARANTY RESERVE FUND

The Guaranty Reserve Fund, a revolving fund administered by DOD, is used to guaranty FMS loans extended by the FFB and commercial lending institutions. Missed payments from FMS customers with guaranteed loans are withdrawn from the Guaranty Reserve Fund when the lender demands payment for defaults that are 10 days overdue. The amounts withdrawn from the fund are converted to new DOD loans with a separate repayment schedule, the proceeds of which are repaid directly to the Guaranty Reserve Fund. The remaining payments for the original loans guaranteed by DOD are continued with the FFB or lending institution in accordance with the original repayment schedule or the schedule pursuant to international debt rescheduling agreements.

Until December 16, 1980, the Congress appropriated 10 percent (25 percent prior to fiscal year 1975) of the annual FMS guaranteed loan program for defaults on loans made by the FFB. The International Security and Development Cooperation Act of 1980 (P.L. 96-533) amended the provision of the AECA regarding the reserve fund by eliminating the requirement for an appropriation of FMS financing in the amount of 10 percent of the face value of guaranteed loans; authorizing use of the balance of funds existing in the Guaranty Reserve Fund as of December 16, 1980, for future payment of claims; providing for a Presidential report to the Congress when the payment of claims reduces the Guaranty Reserve Fund to less than $750 million; allowing for replenishment of the reserve fund, and requiring an annual report on the amount and adequacy of the Guaranty Reserve Fund.

FOREIGN MILITARY SALES CASH PROGRAM

The FMS cash program is carried out under the AECA and enables eligible foreign governments to purchase defense articles, services, and training from the U.S. Government. Normally, the foreign government signs a sales agreement, commonly known as the "Letter of Offer and Acceptance" with the U.S. Government. The terms of the sale and delivery of the items or services are worked out as part of the agreement. Also, the purchasing government is responsible for paying all costs associated with the sale. We have issued numerous reports showing that DOD does not recover full cost. (See app. VII.)

Under this program, DOD can fill orders by providing the items or services from DOD stocks in accordance with Section 21 of the AECA or procuring the items from U.S. firms in accordance with Section 22 of the Act. When the source of supply is new procurement, the U.S. Government agency or military department assigned cognizance for the procurement enters into a contractual arrangement with industry to provide the item or service requested. Sales under the cash program comprise the largest volume of U.S. arms transfer. The following table identifies actual cash sales as of April 7, 1982.

FMS CASH PROGRAM
(Dollars in Thousands)

COUNTRY	FY 1950 to FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	FY 1982	FY 1950 to FY 1982
GRAND TOTAL	52,896,544	5,886,395	7,890,661	10,629,137	12,364,614	7,659,742	8,708,821	106,035,914
Argentina	104,098	12,656	4,618	-	-	-	-	121,372
Australia	1,677,591	122,568	334,829	139,066	450,149	456,989	2,683,861	5,865,053
Austria	86,273	6,279	3,338	54,468	17,381	7,384	3,686	178,809
Bahrain	41	76	24	28	6,029	62	-	6,260
Barbados	-	-	-	-	-	15	-	15
Belgium	2,002,796	6,198	12,166	19,877	11,638	41,539	10,345	2,104,559
Benin	-	*	-	-	-	-	-	*
Bolivia	1,853	140	-	78	28	-	-	2,099
Brazil	88,925	12,841	13,538	311	3,178	4,398	4,616	127,807
Brunei	1	9	-	-	-	172	-	182
Burma	2,719	575	602	563	816	585	1,069	6,929
Cameroon	-	-	-	3	-	-	-	3
Canada	1,277,941	67,192	99,850	73,872	131,952	141,719	155,256	1,947,782
Chile	150,750	235	-	-	-	-	-	150,985
Colombia	16,205	2,246	213	1,710	4,011	5,233	11,269	40,887
Costa Rica	1,157	7	-	10	-	-	-	1,174
Cuba	4,510	-	-	-	-	-	-	4,510
Denmark	1,066,545	13,499	21,330	36,584	14,747	28,125	5,897	1,186,727
Dominican Republic	2,185	*	-	112	111	2	-	2,410
Ecuador	21,442	13,888	22,870	9,659	2,107	11,232	5,373	86,571
Egypt	62,518	35	2,060	6,093	71,166	87,566	13,943	243,381
El Salvador	2,865	179	29	*	371	9,082	2,753	15,279
Ethiopia	83,367	6	-	-	-	-	-	83,375
Fiji	137	-	-	-	1	1,364	1	1,502
Finland	18	5	1	-	*	158	-	182
France	294,675	1,981	6,143	6,140	59,407	13,161	33,860	415,367
Gabon	145	-	-	-	-	-	-	145
Germany	5,848,881	339,404	400,533	627,257	430,965	246,257	103,189	7,996,486
Ghana	255	136	-	-	126	145	-	662
Greece	523,104	191,809	96,281	155,995	102,734	109,162	63,956	1,243,041
Guatemala	14,196	5,654	3,147	1,949	10	4	-	24,960
Haiti	857	190	-	48	12	-	-	1,107
Honduras	6,087	312	308	193	3,392	971	273	11,536
Iceland	503	13	20	4	3	-	-	543
India	64,163	1,441	1,677	6,494	1,211	233	306	75,525
Indochina	8,542	-	-	-	-	-	-	8,542

FMS CASH PROGRAM
(Dollars in Thousands)

COUNTRY	FY 1950 to FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	FY 1982	FY 1950 to FY 1982
Indonesia	47,743	7,766	2,755	35,735	6,919	39,663	26,170	166,751
Iran	9,857,047	1,948,161	453,193	35,513	-	-	-	12,293,914
Iraq	13,152	-	-	-	-	-	-	13,152
Ireland	531	39	69	52	22	27	38	778
Israel	134,953	29,199	824,858	210,371	404,027	127,985	26,007	1,757,400
Italy	741,182	23,135	6,242	16,977	24,453	206,984	72,286	1,091,259
Jamaica	157	*	3	-	-	-	-	160
Japan	451,464	43,556	342,098	479,406	437,045	622,253	98,137	2,473,959
Jordan	552,455	90,250	54,399	33,526	228,035	357,880	30,189	1,346,734
Kenya	1	2,742	2,109	2,550	11,787	22,799	1,204	43,190
Korea	490,716	182,581	294,027	214,540	271,689	369,740	1,053,706	2,876,999
Kuwait	573,502	19,163	70,891	10,831	127,372	45,933	80,924	928,616
Lebanon	15,345	-	238	1,390	10,429	32,103	53	59,558
Liberia	857	21	8	45	-	407	-	1,338
Libya	29,594	-	-	-	-	-	-	29,594
Luxembourg	2,778	2	11	240	225	434	759	4,449
Madagascar	-	-	-	-	*	*	-	*
Malaysia	11,669	5,044	1,951	31,810	5,969	31,863	155	88,459
Mali	106	-	-	-	-	-	-	106
Morocco	15,015	156	1,973	91	15	107,593	6,025	130,868
Nepal	73	-	-	-	-	-	-	73
Netherlands	1,986,641	32,407	66,975	469,202	158,702	513,315	297,219	3,524,461
New Zealand	124,609	5,485	8,373	11,692	16,515	19,261	9,924	195,859
Nicaragua	4,330	575	11	-	1	-	-	4,917
Niger	8	-	-	-	-	-	-	8
Nigeria	11,733	5,408	9,248	8,026	22,581	6,583	1,331	64,913
Norway	1,578,860	15,244	45,337	27,160	20,214	53,874	19,837	1,760,526
Oman	1,832	764	-	50	21	21,541	19,924	44,132
Pakistan	251,206	142,184	44,643	22,694	29,148	59,802	1,600,783	2,150,460
Panama	3,261	191	64	139	264	422	196	4,537
Paraguay	113	227	40	9	96	33	92	610
Peru	111,395	9,606	5,344	4,816	3,124	4,858	537	139,680
Philippines	78,984	67,861	29,013	15,807	9,331	6,583	6,544	214,123
Portugal	13,837	1,143	738	1,316	23,514	21,277	6,615	68,440
Qatar	-	-	-	-	84	262	74	420
Rwanda	-	-	-	-	-	747	-	747

FMS CASH PROGRAM
(Dollars in Thousands)

COUNTRY	FY 1950 to FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	FY 1982	FY 1950 to FY 1982
Saudi Arabia	16,890,739	1,679,462	3,373,295	5,832,439	4,521,992	2,140,236	1,616,715	36,054,878
Senegal	9	-	-	-	-	-	-	9
Singapore	45,435	112,352	12,528	7,740	120,522	42,357	9,131	350,065
Somalia	-	-	-	-	-	1,100	-	1,100
Scuth Africa	3,149	-	-	-	-	-	-	3,149
Spain	698,702	16,871	42,649	36,767	418,322	107,228	6,714	1,327,253
Sri Lanka	4	-	-	-	-	-	-	4
Sudan	-	86,149	-	908	18	2,189	105	89,369
Surinam	-	1	-	-	-	-	-	1
Sweden	68,540	26,452	5,687	1,902	6,868	28,985	5,552	143,986
Switzerland	549,032	76,521	37,577	58,270	119,943	318,142	3,722	1,163,207
Syria	1	-	-	-	-	-	-	1
Taiwan	757,819	147,581	337,926	544,704	493,670	267,044	57,037	2,605,781
Thailand	192,059	46,570	93,051	359,570	192,266	150,002	70,693	1,104,211
Trinidad - Tobago	94	-	-	-	-	15	-	99
Tunisia	3,272	1,220	1,611	2,317	3,210	8,068	116,453	136,151
Turkey	82,345	*	268	4,980	29,923	75,613	100,874	294,003
United Arab Emirates	2,177	268	36	2,836	154	18,418	10	23,899
United Kingdom	2,070,752	184,131	508,832	260,853	2,943,113	337,758	152,445	6,457,884
Uruguay	7,366	281	61	17	574	638	129	9,066
Venezuela	120,190	1,942	4,207	2,199	3,426	72,453	990	205,407
Vietnam	1,167	-	-	-	-	-	-	1,167
Yemen	133,243	1,895	1,252	167,776	1,523	17,755	16,975	340,419
Yugoslavia	12,145	179	1,114	470	28,193	11,507	6,512	60,120
Zaire	6,163	265	420	174	27	881	501	8,431
Country Totals	52,295,897	5,814,624	7,708,702	10,058,424	12,006,871	7,440,169	8,622,940	103,698,617

FMS CASH PROGRAM
(Dollars in Thousands)

INTERNATIONAL ORGANIZATIONS a/	FY 1950 to FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	FY 1982	FY 1950 to FY 1982
CENTO	5	-	-	-	-	-	-	5
ICAO	5	-	-	-	-	-	-	5
NAMFI	16,451	45	40	9	53	-	-	16,598
NAMMA	-	167	9	100	831	-	-	1,106
NAMGA-F-104	792	1,499	560	281	297	-	-	3,429
NAMSA GENERAL	285,759	36,654	149,519	67,047	46,655	47,601	38,435	671,670
NAMSA-HAWK	53,582	2,507	3,379	5,101	14,291	11,951	6,682	97,493
NAMSA	-	-	-	482	9,445	8,615	108	18,650
NAPMO	-	-	-	491,953	164	288	369	492,774
NATO	109,367	4,527	562	559	13,899	83,642	4,331	216,887
NATO AEW&C Ground Environment Interface	-	-	-	-	-	1,187	-	1,187
NATO AEW&C Operations and Support	-	-	-	-	-	11,420	23,881	35,302
NATO Headquarters	150	-	-	-	9	-	10	169
NATO SEA SPARROW	-	-	19,796	1,474	3,319	16,214	6,590	47,394
NICSMA	-	1	17	14	22	20	8	82
OAS	240	573	928	844	976	521	-	4,081
SACLANT	-	-	-	8	-	-	-	8
SHAPE	5,838	2,292	62	57	85	179	355	8,868
UNITED NATIONS	6	-	-	-	-	-	-	6
Organization Totals	472,195	48,265	174,872	567,929	90,046	181,638	80,769	1,615,714

* Less than $500.

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a/ ABBREVIATIONS

AEW&C - Aircraft Early Warning and Control
CENTO - Central Treaty Organization
ICAO - International Civil Defense Organization
NAMFI - Nato Missile Firing Installation
NAMMA - Nato Multi-Role Combat Aircraft
NAMSA - Nato Maintenance and Supply Agency
NAPMO - NATO Airborne Early Warning and Control Program Management Office
NATO - North Atlantic Treaty Organization
NICSMA - NATO Intergrated Communications System Management Agency
OAS - Organization of American States
SACLANT - Supreme Allied Commander Atlantic
SHAPE - Supreme Headquarters U.S. Allies Europe

Note: As of September 30, 1981.
Totals may not add due to rounding.

FINANCIAL ARRANGEMENTS USED IN THE SALE OF MILITARY EQUIPMENT

Financial incentives and arrangements have been established to enhance the sale of military hardware to foreign countries or to allow countries to continue buying from U.S. sources. These include: FMS waivers for non-recurring charges, "cash flow" method of financing, dependable undertakings, FMS defaults and debt rescheduling, and Export-Import bank loans.

These arrangements, except for dependable undertakings, are considered as additional forms of assistance because they either reduce the amount of cash expected to be received by the U.S. Government from a sale or may require future appropriations if countries default on existing loans. For example, while waivers do not affect the expenditure of security assistance funds in the current budget, each waiver issued represents a subsidy to the purchasing country.

Many of the countries purchasing military equipment are heavily dependent on FMS financing. Cash-flow financing and dependable undertakings in anticipation of future FMS credits commit countries and the United States to larger programs than would normally be undertaken. Additionally, such arrangements appear to commit the Congress to more support than annual appropriations would allow.

Finally, the information included under debt rescheduling and outstanding Export-Import bank credits reflects problems some countries are experiencing in repaying credits extended in prior years. Defaults on FMS and Export-Import bank loans may result in increased debt forgiveness or rescheduling at subsidized rates in the future.

FMS WAIVERS

The AECA mandates that unless a waiver is issued, DOD must charge customers for the administrative and development costs associated with producing and selling military hardware. Further, DOD policy requires the Defense Security Assistance Agency (DSAA) to charge royalty fees for U.S. technical data packages used in military hardware production outside the United States.

Recoupment of administrative surcharges, royalty fees, and non-recurring costs can be waived by DSAA when it is considered in the best interest of the United States. For example, Section 21 (e)(2) of the AECA authorizes the issuance of a waiver for the recoupment of non-recurring research and development costs when the sale would significantly advance the U.S. Government in NATO standardization, standardization with the Armed Forces of Japan, Australia, or New Zealand or provide procurement in the United States under coproduction agreements. Further, Section 27 of the AECA provides that the President may reduce or waive the charges for cooperative projects under which NATO, or one or more countries thereof, agrees to share with the United States the cost of research and development, testing, and evaluation in order to further the objectives of rationalization, standardization and interoperability of the North Atlantic Treaty Organization.

Value of waivers issued since fiscal year 1977

DSAA estimates the value on issued waivers since fiscal year 1977 exceeds $782 million. Of this amount, $764.5 million are charges for non-recurring costs for research and development, $11.8 million for royalty fees on technical data packages, and $6.6 million for administrative surcharges. We were told by DSAA officials that determining the value of a waiver is difficult since it is issued before an FMS case is accepted and is based on either the total projected value of the "accepted" case or the number of units involved. In some instances, the countries involved cancel cases and do not realize the full value of the waiver.

"CASH FLOW" METHOD OF FINANCING

Under the normal credit program authorized for most FMS customers, orders must not exceed the amount of authorized credit. Under the so-called "cash flow" method of financing, more orders can be placed sooner than would ordinarily be possible under a normal credit system, thereby, stretching buying power.

The cash flow financing system as compared to the normal full funding FMS program works as follows. When a weapon system is purchased, a Letter of Offer and Acceptance is signed by the buyer spelling out the equipment delivery and the payment schedule. While the total cost of an item may be hundreds of millions of dollars, not all the money will be paid in the first year after the contract is signed. Major systems have a long lead time before delivery, usually several years, and payments will be spread out over this time period. Under normal FMS financing procedures with most countries, the United States requires that the buyer reserve, or set aside, the full cost of the item when the order is placed. This means that if an item costs $100 million, FMS credits of $100 million must be set aside when the Letter of Offer and Acceptance is signed. Under the cash flow system only the amount of money needed to meet the current fiscal year's cash requirement is set aside. That same $100 million item, for example, may only require $50 million the first year. So only $50 million is set aside and the other $50 million is available to place additional orders up to the limit of its cash requirement during that year. At this time, only Israel and Egypt are permitted to use the cash flow method of financing. We reported on the use of cash flow financing for Egypt in 1982. a/ Under this system, the United States has allowed Egypt to order $3.5 billion of military equipment in the first 3 years of the program (1979 through fiscal year 1981), even though $2.05 billion in credits had been allocated for Egypt. Without cash flow, Egypt could have purchased, through the end of fiscal year 1981, F-4s ($500 million), F-16s ($1 billion), air defense batteries ($600 million), and nothing else. Those three programs would have used up all available credits. No money would have been available until the following year for tanks, personnel carriers, missiles, and other urgent Egyptian needs.

By authorizing this cash flow system, the United States has permitted Egypt to buy much more equipment than would ordinarily be possible. On the other hand, it has made a deeper U.S. commitment without congressional approval for future support. The FMS credit program is the only likely source of funding to meet obligations coming due for orders already placed and for which full program costs have not been set aside.

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a/GAO Report to the Congress "Forging a New Defense Relationship with Egypt" (ID-82-15; Feb. 5, 1982).

We did not evaluate the cash flow financing system used for the Israel program. State and Defense officials told us that it closely parallels Egypt's system but has an even more open-ended authorization in that it does not have a total dollar ceiling.

DEPENDABLE UNDERTAKINGS

Section 22 of the AECA authorizes the use of dependable undertakings for eligible foreign governments and international organizations. Dependable undertakings is one in a number of "terms of sale" used to sell defense equipment. Dependable undertakings are generally used with new procurement contracts. With dependable undertakings the foreign government or international organization makes periodic payments in such amounts and at such times as required by the contract. The U.S. Government collects the cash in advance and makes payments to the contractor on behalf of the foreign country. This contrasts with sales from DOD stock which requires the full costs of the equipment to be paid in advance. According to DOD officials, a termination liability account is set up for each case which shields the United States against any damages or costs that may accrue from the cancellation of the contract.

A critical element to dependable undertakings is DOD's determination that the foreign government or international organization will have the economic resources to fulfill its commitment. When a determination is made, it is implied that the foreign country will be able to make its payments on schedule. The information was not readily available at DOD for us to determine which countries are using dependable undertakings; however, we have identified those eligible countries which have previously defaulted on loans (see p. 76) or had debts rescheduled (see p. 77).

Following is a list of the 76 countries and 1 international organization which were authorized dependable undertakings as of October 1981.

Africa

- Botswana
- Cameroon
- Kenya
- Liberia
- Morocco
- Nigeria
- Sudan
- Tunisia

Europe

- Austria
- Belgium
- Denmark
- France
- Germany
- Greece
- Iceland
- Ireland
- Italy
- Luxembourg
- Malta
- Netherlands
- Norway
- Portugal
- Spain
- Sweden
- Switzerland
- Turkey
- United Kingdom
- Yugoslavia

Far East

- Australia
- Brunei
- Indonesia
- Japan
- Korea
- Malaysia
- New Zealand
- Philippines
- Singapore
- Taiwan
- Thailand

Near East and South Asia

- Bahrian
- Bangladesh
- Egypt
- India
- Israel
- Jordan
- Kuwait
- Lebanon
- Nepal
- Pakistan
- Oman
- Qatar
- Saudi Arabia
- The United Arab Emirates
- Yemen Arab Republic

Western Hemisphere

- Bahamas
- Barbados
- Brazil
- Canada
- Colombia
- Costa Rica
- Dominica
- Dominican Republic
- Ecuador
- El Salvador
- Guatemala
- Haiti
- Honduras
- Jamaica
- Mexico
- Panama
- Peru
- St. Lucia
- St. Vincent
- Surinam
- Trinidad and Tobago
- Venezuela

International Organizations

- NATO (North Atlantic Treaty Organization and its agencies)

FMS DEFAULTS AND DEBT RESCHEDULINGS

February 1982 statistics show that 13 countries were in default on FMS loans. Three countries, Bolivia, Nicaragua and Ethiopia defaulted on payments in fiscal year 1980 and eight countries, Costa Rica, El Salvador, Liberia, Senegal, Sudan, Tunisia, Turkey and Zaire defaulted in fiscal year 1981. Lebanon and Morocco, which together constitute about 67 percent of the $28.9 million in defaulted amounts did not make required payments when due in fiscal year 1982.

We were told by DSAA officials that the listing of countries in default changes monthly and most countries do not stay in default in excess of 12 months. They said that some countries, such as Morocco, will pay the defaulted amount as soon as the United States notifies the government that future assistance will be terminated. As of April 1982 only Bolivia, Nicaragua, Ethiopia, and Zaire had not made payments for over 12 months. Ethiopia, according to DSAA officials, defaulted on over $4 million in direct loans in December 1979 and cannot reschedule its loans due to limited diplomatic relations with the United States. However, Zaire which defaulted on $2 million in direct loans and $104,000 in guaranteed loans (see table 1) is undergoing debt rescheduling. In addition, we were told that Sudan and Liberia are expected to complete their debt rescheduling arrangements during fiscal year 1982.

Rescheduled loans

DOD has debt rescheduling arrangements with several FMS customers who have missed loan payments for interest and principal. These rescheduled amounts which become new loans are identified in table 2. The amounts identified include the missed payments, the principals for the new loans, and the amount of interest to be paid over the life of the loans. The rate of interest is determined from averaging the interest rates associated with the defaulted payment.

COMMERCIAL EXPORTS AND LISTING OF TOP MILITARY EQUIPMENT MANUFACTURERS

This appendix lists the commercial exports licensed under the AECA as well as the top 25 companies supplying military equipment under FMS and commercial sales for 1981. Unlike FMS, DOD does not administer commercial sales even though they are an element of security and military assistance for congressional oversight purposes. Commercial sales are licensed under authority provided in Section 38 of the AECA and controlled through the Office of Munitions Control, Department of State.

COMMERCIAL EXPORTS LICENSED UNDER ARMS EXPORT CONTROL ACT
(Dollars in Thousands)

	FY 1950 to FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	Preliminary FY 1981	FY 1950 to FY 1981	Estimated FY 1982	Estimated FY 1983
WORLDWIDE	3,720,962	1,523,403	1,676,007	1,526,992	1,911,722	2,064,274	12,423,360	1,791,248	2,084,804
EAST ASIA & PACIFIC	701,014	321,567	405,689	432,257	500,015	572,156	2,932,698	544,053	635,553
AUSTRALIA	45,557	11,012	29,305	45,421	51,131	35,244	217,661	40,000	40,000
BRUNEI	247	234	886	1,126	63	-	2,556	1,000	1,500
BURMA	680	26	632	7,986	229	203	9,756	1,000	1,000
CHINA	4	1,023	-	-	622	-	1,649	1,000	2,000
FIJI	2	-	1	*	1	-	5	-	-
FRENCH POLYNESIA	57	2	10	291	1	-	362	-	-
GILBERT ISLANDS	-	-	2	-	-	-	2	-	-
HONG KONG	2,874	3,801	12,167	16,505	17,013	19,234	71,595	30,000	20,000
INDONESIA	8,990	5,295	3,011	17,011	6,221	6,673	47,201	10,000	10,000
JAPAN	394,095	102,823	123,178	196,834	264,892	344,862	1,426,684	300,000	400,000
KAMPUCHEA	5	-	-	-	-	-	5	-	-
KOREA	25,490	77,169	74,714	60,864	41,459	28,710	308,405	25,000	25,000
LAOS	4	-	-	-	-	-	4	-	-
MACAU	12	23	4	95	19	-	153	-	-
MALAYSIA	29,389	41,500	63,150	18,209	19,016	29,522	200,785	25,000	25,000
NAURU	9	-	-	-	208	-	218	-	-
NEW CALEDONIA	229	74	103	78	2,425	79	2,989	50	50
NEW HEBRIDES	6	2	-	*	1	-	9	-	-
NEW ZEALAND	5,202	3,516	4,433	2,537	6,019	3,709	25,417	5,000	5,000
NORFOLK ISLANDS	-	-	*	-	-	-	*	-	-
PAPUA NEW GUINEA	95	188	39	189	8	4	523	3	3
PHILIPPINES	17,749	14,082	7,184	5,589	7,954	967	53,526	1,000	1,000
PITCAIRN	-	-	-	-	-	-	*	-	-
SINGAPORE	31,108	6,652	4,494	9,449	11,167	22,691	85,560	20,000	20,000
SOLOMON ISLANDS	-	-	59	46	-	-	105	-	-
TAIWAN	116,594	46,140	73,637	44,547	57,770	66,731	405,419	75,000	75,000
THAILAND	22,554	8,005	8,677	5,480	13,796	13,526	72,039	10,000	10,000
VIETNAM	66	-	-	-	-	-	66	-	-
WESTERN SAMOA	2	-	*	*	*	-	2	-	-

COMMERCIAL EXPORTS LICENSED UNDER ARMS EXPORT CONTROL ACT
(Dollars in Thousands)

	FY 1950 to FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	Preliminary FY 1981	FY 1950 to FY 1981	Estimated FY 1982	Estimated FY 1983
NEAR EAST & SOUTH ASIA	952,806	451,748	478,496	372,432	403,251	304,176	2,962,908	296,800	315,000
AFGHANISTAN	81	132	3	100	281	-	597	-	-
ALGERIA	1,555	187	5	122	-	243	2,112	200	-
BAHRAIN	498	686	126	695	224	1,171	3,400	1,000	1,000
BANGLADESH	150	808	32	16	552	474	2,034	1,000	1,000
EGYPT	652	1,266	6,628	1,258	6,530	4,052	20,385	15,000	30,000
INDIA	12,937	9,132	9,456	9,887	2,833	4,643	48,887	5,000	5,000
IRAN	282,860	138,432	132,651	109,787	7,036	-	670,767	-	-
IRAQ	29	63	139	9	1	-	241	-	-
ISRAEL	431,541	221,629	122,992	173,537	271,805	158,080	1,379,585	150,000	150,000
JORDAN	522	3,708	9,337	3,834	53,638	41,653	112,692	50,500	50,000
KUWAIT	6,068	198	2,132	3,283	232	1,307	13,220	5,000	5,000
LEBANON	4,957	2	2,095	3,451	768	1,050	12,324	1,500	1,500
LIBYA	30,595	199	303	-	221	-	31,318	-	-
MOROCCO	5,495	21,616	11,996	8,912	17,385	3,143	68,546	5,000	5,000
NEPAL	48	-	7	1	67	-	123	-	-
OMAN	1,644	1,146	1,405	639	186	661	5,682	1,500	3,000
PAKISTAN	8,160	4,877	8,521	4,334	4,670	11,108	41,669	5,000	5,000
QATAR	60	578	289	3,264	1,018	1,002	6,211	2,000	2,000
SAUDI ARABIA	160,950	44,050	166,278	44,358	28,985	71,540	516,162	50,000	50,000
SRI LANKA	19	21	*	13	33	-	86	-	-
SYRIA	323	40	831	189	1	-	1,384	0	-
TUNISIA	175	2,321	279	3,099	1,687	108	7,669	2,500	500
UNITED ARAB EMIRATES	3,485	658	2,987	1,609	5,085	3,937	17,761	2,000	5,000
YEMEN	*	1	2	35	14	4	56	100	1,000
EUROPE AND CANADA	1,796,416	663,283	698,536	597,957	935,489	1,147,263	5,839,944	887,809	1,049,115
AUSTRIA	13,112	1,278	3,244	1,242	5,543	2,260	26,677	5,000	5,000
BELGIUM	61,013	18,030	30,664	35,513	38,955	32,839	217,013	50,000	50,000
BULGARIA	1	-	-	-	-	-	1	-	-
CANADA	343,766	103,937	105,000	83,900	254,597	363,850	1,255,050	150,000	150,000
CYPRUS	25	100	40	113	-	-	279	-	-
DENMARK	31,465	11,177	13,909	7,538	8,961	12,285	85,333	10,000	10,000
FINLAND	3,752	3,898	708	1,806	692	2,342	13,196	4,000	5,000
FRANCE	100,245	31,520	23,352	23,198	31,428	37,180	246,922	35,000	35,000

COMMERCIAL EXPORTS LICENSED UNDER ARMS EXPORT CONTROL ACT
(Dollars in Thousands)

	FY 1950 to FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	Preliminary FY 1981	FY 1950 to FY 1981	Estimated FY 1982	Estimated FY 1983
EUROPE & CANADA (CONT.)									
GERMANY	361,034	126,572	124,920	124,536	153,400	209,489	1,099,950	180,000	200,000
GIBRALTAR	5	5	14	*	1	-	24	10	10
GREECE	51,260	12,626	100,958	76,220	28,355	16,332	285,781	10,000	10,000
ICELAND	617	49	16	5	16	14	718	10	20
IRELAND	1,031	171	75	171	364	392	2,204	750	2,000
ITALY	282,813	118,724	104,282	70,047	96,713	97,229	769,808	135,000	150,000
LIECHTENSTEIN	16	3	17	20	2	-	60	25	25
LUXEMBOURG	10,226	104	74	384	233	416	11,435	1,000	2,000
MALTA	10	-	22	2	*	-	35	5	2
MONACO	18	5	2	2	2	25	55	3	3
NETHERLANDS	46,702	89,296	46,326	39,171	55,044	55,143	331,682	50,000	50,000
NORWAY	25,581	20,187	23,712	13,442	32,417	18,312	133,652	3,000	20,000
PORTUGAL	6,544	2,804	2,966	1,513	1,737	3,340	18,904	1,000	5,000
ROMANIA	1,178	200	-	-	1,181	95	2,654	1,000	50
SPAIN	96,892	33,410	28,164	26,203	39,627	61,191	285,487	50,000	50,000
SWEDEN	75,707	28,025	22,187	22,207	46,264	53,504	247,894	29,000	50,000
SWITZERLAND	34,901	6,824	8,368	8,022	22,939	13,709	94,764	15,000	15,000
TURKEY	21,017	13,970	9,077	993	1,127	2,707	48,890	10,000	10,000
UNION OF SOV SOC REP	3	7	-	-	-	-	10	-	-
UNITED KINGDOM	223,892	38,037	48,646	58,224	114,598	163,380	646,877	125,000	225,000
YUGOSLAVIA	4,559	2,327	1,792	3,488	1,195	1,231	14,590	3,000	5,000
AFRICA	48,534	19,785	14,709	6,382	7,257	2,928	99,595	10,450	11,750
ANGOLA	24	22	-	-	-	-	45	-	-
BENIN	*	-	-	-	-	-	*	-	-
BOTSWANA	171	2	25	24	24	15	261	100	150
BURUNDI	1	-	-	-	68	569	638	-	-
CAMEROON	1,089	7,732	2,838	334	82	9	12,085	2,000	2,000
CENTRAL AFRICAN EMP	57	-	-	-	-	-	57	-	-
CHAD	*	15	-	-	-	-	16	-	-
DJIBOUTI	11	-	*	-	-	-	11	-	-
EQUATORIAL GUINEA	*	-	-	-	-	-	*	-	-
ETHIOPIA	445	1,074	-	2	-	-	1,522	-	-
GABON	25	178	295	71	858	1	1,428	2,000	2,000

COMMERCIAL EXPORTS LICENSED UNDER ARMS EXPORT CONTROL ACT
(Dollars in Thousands)

	FY 1950 to FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	Preliminary FY 1981	FY 1950 to FY 1981	Estimated FY 1982	Estimated FY 1983
AFRICA (CONT.)									
GAMBIA	263	-	1	1	-	-	265	-	-
GHANA	58	283	56	39	121	-	557	-	-
GUINEA	-	-	2	7	-	-	9	-	-
IVORY COAST	253	-	10	314	14	-	592	-	-
KENYA	5,613	227	346	226	197	165	6,774	300	800
LESOTHO	-	1	1	3	18	-	23	-	-
LIBERIA	317	92	36	612	264	486	1,806	500	800
MADAGASCAR	213	66	1	294	-	-	574	-	-
MALAWI	10	-	-	-	-	-	10	-	-
MALI	5	*	-	1	24	-	30	-	-
MAURITANIA	1	98	-	104	-	-	204	-	-
MAURITIUS	57	38	10	24	10	-	139	-	-
MOZAMBIQUE	448	-	-	-	-	-	448	-	-
NIGER	-	-	125	-	81	-	206	-	-
NIGERIA	27,131	1,614	4,724	2,835	4,556	1,401	42,262	5,000	5,000
REUNION	1	-	-	-	-	-	1	-	-
RWANDA	*	-	-	-	-	-	*	-	-
SENEGAL	24	197	45	6	7	-	280	-	-
SEYCHELLES	31	-	1	4	-	-	35	-	-
SIERRA LEONE	4	-	-	25	26	-	55	-	-
SOMALIA	*	-	-	-	-	-	*	-	-
SOUTH AFRICA	8,233	5,702	4,670	25	-	-	18,631	-	-
ST. HELENA	*	-	-	-	-	-	*	-	-
SUDAN	14	89	*	6	3	-	112	-	-
SWAZILAND	109	-	4	-	-	-	113	-	-
TANZANIA	635	351	423	944	598	23	2,975	50	100
TOGO	109	-	-	9	-	-	118	-	-
UGANDA	464	-	-	-	-	-	464	-	-
UPPER VOLTA	-	54	-	8	10	-	72	-	-
ZAIRE	2,535	1,733	937	424	5	45	5,679	100	500
ZAMBIA	185	216	156	39	236	28	859	200	200
ZIMBABWE	-	-	-	-	54	186	239	200	200

COMMERCIAL EXPORTS LICENSED UNDER ARMS EXPORT CONTROL ACT
(Dollars in Thousands)

	FY 1950 to FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	Preliminary FY 1981	FY 1950 to FY 1981	Estimated FY 1982	Estimated FY 1983
AMERICAN REPUBLICS	170,015	46,082	56,531	58,621	65,711	37,752	434,710	44,836	59,586
ANTIGUA	40	2	2	5	9	1	59	15	10
ARGENTINA	34,016	6,314	13,258	29,496	7,323	4,553	94,961	5,000	5,000
BAHAMAS	68	8	10	21	124	46	277	150	150
BARBADOS	53	8	5	26	10	13	115	15	15
BELIZE	61	12	16	55	73	186	405	100	100
BERMUDA	330	103	13	52	306	15	811	400	100
BOLIVIA	1,178	708	794	1,404	200	9	4,293	700	-
BRAZIL	56,713	6,055	4,793	8,174	7,575	9,901	93,212	10,000	20,000
BRITISH VIRGIN IS.	58	7	1	-	4	-	70	2	20
CAYMAN ISLANDS	70	*	178	151	2	-	400	2	5
CHILE	7,403	1,357	-	-	-	-	8,760	-	-
COLOMBIA	6,245	7,071	2,583	2,081	1,418	2,705	22,102	5,000	5,000
COSTA RICA	466	132	166	204	202	57	1,226	150	150
DOMINICA	10	*	-	-	10	-	20	-	-
DOMINICAN REPUBLIC	437	639	820	196	306	101	2,700	1,000	1,000
ECUADOR	3,824	643	16,558	529	335	1,410	23,297	1,000	2,000
EL SALVADOR	1,363	229	270	151	207	17	2,237	300	200
FALKLAND ISLANDS	-	-	*	-	-	-	*	-	-
FRENCH GUIANA	173	-	2	-	-	-	175	-	-
GREENLAND	*	2	4	6	5	4	23	6	5
GRENADA	12	2	1	7	-	-	22	1	1
GUADELOUPE	1	1	1	1	18	5	28	2	5
GUATEMALA	2,236	1,020	550	868	417	7	5,097	750	100
GUYANA	65	113	4	5	7	707	901	20	500
HAITI	1,010	451	396	17	-	6	1,881	200	50
HONDURAS	923	102	1,102	1,859	666	923	5,576	500	500
JAMAICA	380	216	157	87	48	443	1,332	200	500
MARTINIQUE	6	2	3	2	-	1	14	2	2
MEXICO	4,861	2,386	2,610	1,384	1,735	3,603	16,579	2,200	5,000
MONTSERRAT	4	*	-	-	5	-	9	-	-

COMMERCIAL EXPORTS LICENSED UNDER ARMS EXPORT CONTROL ACT
(Dollars in Thousands)

	FY 1950 to FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	Preliminary FY 1981	FY 1950 to FY 1981	Estimated FY 1982	Estimated FY 1983
AMERICAN REPUBLICS (cont.)									
NETH ANTILLES	934	12	13	242	7	6	1,215	10	300
NICARAGUA	2,039	1,606	597	1	-	5	4,249	50	50
PANAMA	5,009	2,571	976	828	29,241	752	39,376	1,000	1,000
PARAGUAY	895	435	212	277	640	177	2,636	300	300
PERU	13,552	5,289	4,369	1,583	843	3,352	28,989	5,000	5,000
ST. CHRIST-NEVIS	1	1	-	1	-	-	2	-	-
ST. LUCIA	6	3	2	4	1	-	19	2	3
ST. PIERRE + MIQUELON	*	-	-	-	-	-	*	-	-
ST. VINCENT + GREN.	3	-	-	-	2	-	5	-	-
SURINAM	43	8	19	11	4	18	103	15	25
TRINIDAD - TOBAGO	255	27	85	61	368	138	934	500	500
TURKS + CAICOS	*	3	-	-	-	-	3	-	-
URUGUAY	840	395	67	114	259	591	2,265	250	2,000
VENEZUELA	24,435	7,949	5,890	8,718	13,342	8,000	68,333	10,000	10,000
International Organ.	51,177	20,938	22,047	59,343	56,604	24,778	234,887	7,300	13,800

*Less than $500.

Note: As of September 30, 1981.
Totals may not add due to rounding.

TOP 25 COMPANIES SUPPLYING MILITARY EQUIPMENT UNDER FMS AND COMMERCIAL EXPORT SALES

FISCAL YEAR 1981

(Dollars in Thousands)

FMS Contractors	Sales	Rank	Commercial Exporters	Sales
McDonnell Douglas	$1,211,480	1	Lockheed Corp.	$ 198,662
United Technologies	632,465	2	Hughes Aircraft	121,373
Vinnell Corp.	409,591	3	Nissho-Iwai American	79,857
General Dynamics	377,124	4	Raytheon Co.	75,551
Al Huseini	323,890	5	Boeing Corp.	67,658
Hughes Aircraft	259,678	6	Teledyne Inc.	61,639
Westinghouse	187,907	7	Texas Instruments	47,007
Raytheon Co.	184,829	8	Olin Mathieson	45,482
General Electric	174,542	9	Singer	39,768
Northrop Corp.	164,341	10	Bendix Corp.	36,401
Lockheed Corp.	135,442	11	Nittler Forwarder	35,894
Ex Cell O Corp.	122,042	12	AVCO	29,897
Grumman Corp.	116,112	13	Electric Memories	26,717
F M C Corp.	106,049	14	Luigi Serra Inc.	25,888
Chrysler Corp.	102,170	15	Colt's Inc.	24,090
Science Applications Inc.	93,410	16	Emery Air Freight	21,929
Teledyne Inc.	86,242	17	NAPCO Industry	21,510
Sperry Rand Corp.	83,526	18	F M C Corp.	20,897
Ford Motor Co.	78,664	19	Smith & Wesson	20,455
AT&T	72,150	20	Sperry Rand Corp.	19,916
Saudi Tarmac, Ltd.	64,475	21	Sumitomo Shoji	19,892
General Motors Corp.	64,334	22	Thiokol Chemical	19,353
Saudi Maintenance Corp.	60,585	23	Northrop Corp.	19,171
Hyun Dai Construction	55,744	24	Litton Industries	17,181
E Systems Inc.	54,099	25	United Technologies	17,110
	$5,220,891			$1,113,298

FOREIGN MILITARY SALES
TOP 25 COMPANIES
(Dollars in Thousands)

Company	FY 1977		FY 1978		FY 1979		FY 1980		FY 1981	
	Sales	Rank	Sales	Rank	Sales	Rank	Sales	Rank	Sales	Rank
McDonnell Douglas	446,134	2	273,857	5	638,853	1	471,238	4	1,211,480	1
United Technologies	87,102	12	115,302	11	249,058	5	749,047	3	632,465	2
Vinnell Corp.	-	-	103,726	12	110,842	9	-	-	409,591	3
General Dynamics	303,322	4	1,475,524	1	517,928	2	992,958	1	377,124	4
Al Huseini	-	-	-	-	205,622	6	-	-	323,890	5
Hughes Aircraft	156,092	7	156,188	10	86,423	14	95,533	20	259,678	6
Westinghouse	70,986	16	56,403	17	85,266	15	140,101	15	187,907	7
Raytheon Co.	149,028	8	271,046	6	132,113	8	435,468	5	184,829	8
General Electric	220,956	6	175,657	8	101,422	13	175,597	11	174,542	9
Northrop Corp.	853,022	1	266,978	7	472,282	3	859,401	2	164,341	10
Lockheed Corp.	305,226	3	297,292	4	141,812	7	148,536	13	135,442	11
Ex Cell O Corp.	-	-	-	-	-	-	-	-	122,042	12
Grumman Corp.	252,814	5	69,992	14	-	-	-	-	116,112	13
F M C Corp.	-	-	70,683	13	65,267	20	232,933	7	106,049	14
Chrysler Corp.	-	-	-	-	-	-	197,089	10	102,170	15
Science Applications, Inc.	-	-	-	-	-	-	-	-	93,410	16
Teledyne Inc.	21,241	24	26,871	25	53,237	23	108,541	19	86,242	17
Sperry Rand Corp.	-	-	-	-	75,138	16	72,705	23	83,526	18
Ford Motor Co.	42,260	17	65,642	15	-	-	-	-	78,664	19
AT&T	26,773	20	28,176	24	61,832	21	78,773	22	72,150	20
Saudi Tarmac, Ltd.	77,247	14	-	-	-	-	-	-	64,475	21
General Motors Corp.	-	-	31,969	22	50,692	25	109,071	18	64,334	22
Saudi Maintenance Corp.	-	-	-	-	-	-	128,834	17	60,585	23
Hyun Dai Const.	-	-	-	-	-	-	58,338	25	55,744	24
E Systems, Inc.	-	-	-	-	-	-	-	-	54,099	25
Other (Top 25 Companies) a/	683,074	-	1,382,226	-	936,988	-	1,277,732	-	-	-
Total	$3,695,277		$4,867,532		$3,984,775		$6,331,895		$5,220,891	
Total foreign military sales	$4,449,536		$5,805,480		$5,329,876		$8,157,571		$7,590,486	

a/ All the top 25 companies are not listed.

Note: As of September 30, 1981.
Totals may not add due to rounding.

COMMERCIAL EXPORT SALES
TOP 25 COMPANIES
(Dollars in Thousands)

	FY1977		FY1978		FY1979		FY1980		FY1981	
Company	Sales	Rank	Sales	Rank	Sales	Rank	Sales	Rank	Sales	Rank
Lockheed Corp.	$102,394	1	$ 190,503	1	$ 49,369	6	$133,525	1	$ 198,662	1
Hughes Aircraft	29,925	8	78,577	4	23,489	11	52,261	6	121,372	2
Nissho-Iwai American	19,960	15	32,406	11	44,177	8	64,300	4	79,857	3
Raytheon Co.	19,204	17	81,360	3	187,049	1	47,702	7	75,551	4
Boeing Corp.	47,489	3	41,536	8	80,496	2	25,406	12	67,658	5
Teledyne Inc.	-	-	-	-	17,882	17	60,931	5	61,639	6
Texas Instruments	-	-	-	-	16,970	19	26,504	11	47,007	7
Olin Mathieson	23,869	11	38,026	10	47,589	7	25,109	13	45,482	8
Singer	10,615	23	30,868	12	21,426	12	39,689	8	39,768	9
Bendix Corp.	-	-	-	-	-	-	-	-	36,401	10
Nittler Forwarder	-	-	-	-	-	-	27,856	10	35,894	11
AVCO	23,049	13	38,338	9	27,290	10	-	-	29,897	12
Electric Memories	-	-	13,223	21	15,592	21	-	-	26,717	13
Luigi Serra Inc.	-	-	16,934	17	16,854	13	15,143	21	25,888	14
Colt's Inc.	21,617	14	-	-	20,891	-	14,845	22	24,090	15
Emery Air Freight	-	-	-	-	-	-	19,299	17	21,929	16
NAPCO Industry	-	-	-	-	-	-	-	-	21,510	17
F M C Corp.	-	-	-	-	-	-	17,112	20	20,897	18
Smith & Wesson	10,336	24	-	-	-	-	-	-	20,455	19
Sperry Rand Corp.	-	-	-	-	-	-	13,487	25	19,916	20
Sumitomo Shoji	-	-	-	-	13,783	23	14,161	23	19,892	21
Thiokol Chemical	-	-	-	-	-	-	-	-	19,353	22
Northrop Corp.	41,005	5	53,341	6	30,643	9	-	-	19,171	23
Litton Industries	-	-	-	-	-	-	-	-	17,181	24
United Technologies	40,015	-	65,772	5	52,688	4	86,059	2	17,110	25
Other (Top 25 Companies)	322,088	-	333,262	-	233,862	-	226,862	-	-0-	-
	$711,566		$1,014,146		$900,050		$910,251		$1,113,298	

WORLD MILITARY EXPENDITURES AND ARMS TRANSFERS 1970-1979

HIGHLIGHTS

This document is published annually. It includes revisions to data previously published and adds the most recent year for which reliable data are available. The military and economic data in *World Military Expenditures and Arms Transfers: 1970-1979* describe the size, trends and distribution of global military expenditures and the world's arms trade. This information includes the amount of resources devoted to military purposes by individual states, alliances, and the world, the relative burden each of these bear, and a ten-year history for each. In addition, for this year's edition linear projections of selected data are made to show what could be expected through 1981 if the trends developed during the ten year period 1970-1979 continue. *Unless stated otherwise, all monetary figures and comparisons use dollars which have been adjusted for inflation and are stated in constant 1978 dollars.* A caution: these data do not and are not meant to indicate the relative military capabilities of states, how efficiently or wisely states allocate expenditures, or whether any individual country or region is spending too much or too little for military purposes.

There has been a gradual upward trend, after accounting for price increases, in worldwide military expenditures since the end of World War II. Figure 1 charts this steady rise in military expenditure dollars adjusted for inflation. World military expenditures continued to rise in 1979, reaching a total of 568 billion then-year dollars by the end of the year. After adjusting for inflation, this represented an increase of four percent from the comparable 1978 total.

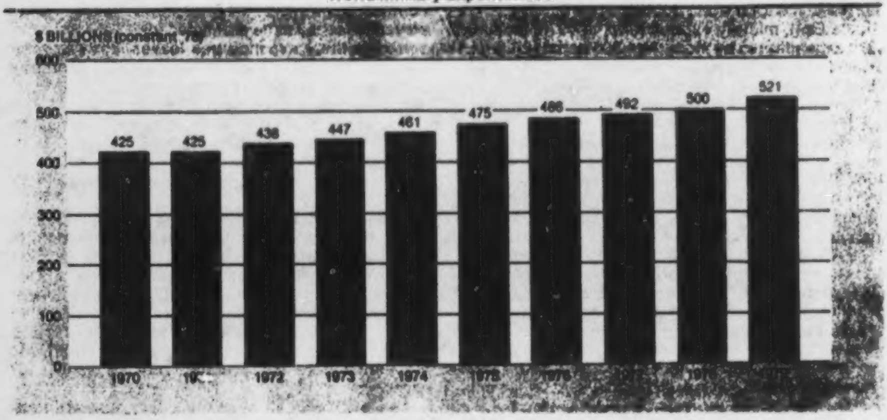
Between 1970-1979, the 22.5 percent growth in inflation-adjusted military expenditures was significantly less than the 43 percent rise in world gross national product (GNP). The relatively small increase in world military expenditures as compared to the GNP is reflected in the percent of world's goods and services committed to military expenditures, depicted in Figure 2. Trends established in the annual percent change in military expenditure and GNP appear to buttress the conclusion that the world's nations perceive the need to invest a greater share of their wealth in armaments.

Figure 3 shows military expenditures for developed and developing countries from 1970 to 1979. (For a list of developed and developing countries, see Statistical Notes.) Taken together, their military expenditures increased in constant dollars by $96 billion during the decade. In comparison, over the same period, world GNP increased by almost $3 trillion, or about 30 times as much. Developed countries spent $402.7 billion on military expenditures in 1979; this represents a 3.1 percent increase from 1978. Developing states also increased their allocation of resources to the military, spending some $118.7 billion in 1979, up eight percent from the previous year.

In 1979, fifty one countries decreased the real value of the resources used for military purposes compared to 1978.* These included eight developed countries—

Figure 1

World Military Expenditures



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*These countries are: Albania, Argentina, Australia, Bangladesh, Bolivа, Brazil, Bulgaria, Cameroon, Canada, Cape Verde, the Central African Republic, Chile, Congo, Czechoslovakia, Ecuador, Egypt, El Salvador, Ghana, Greece, Guatemala, Guyana, Honduras, Hungary, India, North Korea, South Korea, Kuwait, Liberia, Libya, Malawi, Malaysia, Mexico, Morocco, New Zealand, Nicaragua, Nigeria, Oman, Panama, Peru, Philippines, Poland, Romania, South Africa, Sudan, Togo, Tunisia, Turkey, Uganda, Upper Volta, Venezuela, and Zimbabwe.

Reproduced from U.S. Arms Control and Disarmament Agency. World military expenditures and arms transfers, 1970–1979. Washington, 1982. p. 1–11.

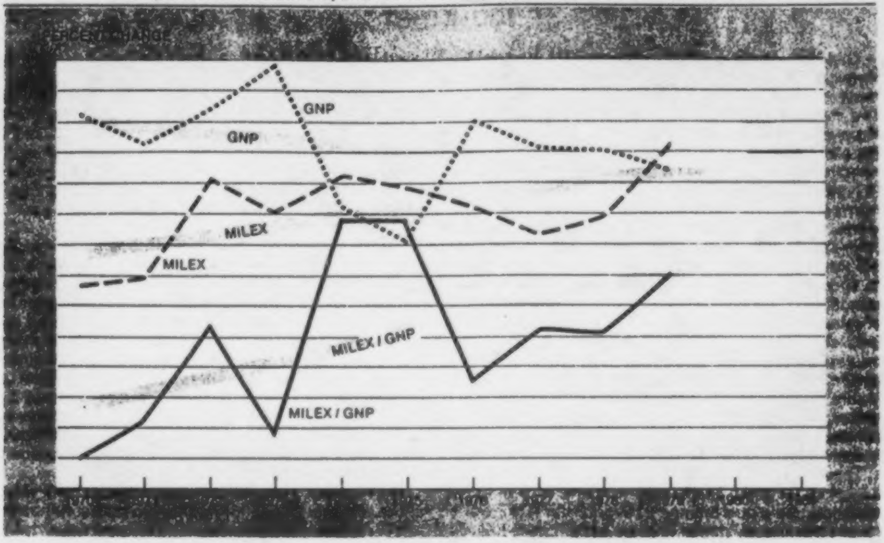

Annual Percent Change in World Military Expenditures and GNP (constant 1978 dollars) and World Military Expenditures as a Percent of GNP

Figure 2

Australia, Canada, Czachoslovakia, Hungary, New Zealand, Poland, Romania, and South Africa—and three Middle Eastern countries—Egypt, Kuwait, and Oman. Sixteen of these countries also reduced their military expenditures in the preceding year, 1978.

As can be deduced from Figure 4, North America and Europe continue to account for about three-fourths of the total world military expenditures. In the Middle East, military expenditures in 1979 exceeded 1970 expenditures by more than 300 percent. Military expenditures in 1979 also increased over 1970 in all other regions except North America, where, early in the decade, high US military expenditures reflected involvement in Vietnam.

Figure 5 displays the general upward trend in military expenditures in most regions, the Soviet Union, and Warsaw Pact over the last ten years. Especially apparent is the growth of Soviet military expenditures as compared to the United States—whose expenditures declined during much of the decade. However, except for the years 1976, 1977 and 1978, total North Atlantic Treaty Organization (NATO) expenditures exceeded those of the Warsaw Pact states. NATO expenditures during the first half of the decade trended downward but began steadily to increase after 1976. In contrast, each year the Warsaw Pact increased expenditures to a point that by the end of the decade these expenditures nearly matched NATO commitments.

A comparison of the year-by-year military burden, enumerated in Table I of the Statistical Tables and expressed as the percent of GNP spent on military expenditures, shows that NATO states throughout the decade spent less than one-half of the percentage allocation of GNP for military expenditures than did the Warsaw Pact states. (The NATO burden steadily decreased during the period and approached four percent while the Warsaw Pact burden remained above eleven percent for the entire decade.) This higher burden of military expenditures leaves less capital for other uses such as the investment required for future growth or the production of consumer goods.

Figure 6 displays the relative distribution of world military expenditures in 1979. Whereas the United States accounts for over one-half of the NATO military expenditures, the Soviet Union accounts for over 85 percent of the entire Warsaw Pact military expenditures.

Spending by the ten states with the highest 1979 military budgets and, for comparison purposes, the armed forces these expenditures support, are depicted in Figure 7. The Soviet Union and the United States continue to devote vast sums for military purposes in comparison to others. Seventh-ranked in 1978, Iran was not included because its 1979 military fiscal commitment is not available. Otherwise, the listed ten states have not changed position in the 1979 ordering.

The relative importance of military expenditures—

as contrasted with social and administrative expenditures—can be gauged by examining them as a percentage of central government spending. (See Statistical Tables, Table I.) The ten nations which spent the largest percentage of their central government expenditures for military purposes in 1979 were the Soviet Union (51.0%), Yemen Aden (50.0%), the United Arab Emirates (49.4%), Oman (39.9%), Israel (39.2%), Yemen Sanaa (37.8%), Syria (36.4%), Ethiopia (35.1%), Saudi Arabia (27.7%), and South Korea (27.4%). The United States ranked eleventh having earmarked 24.7 percent of central government expenditures for military purposes. From 1970 through 1979 military expenditures of the Soviet Union, Yemen (Aden), Oman, and Israel

Figure 3

World Military Expenditures

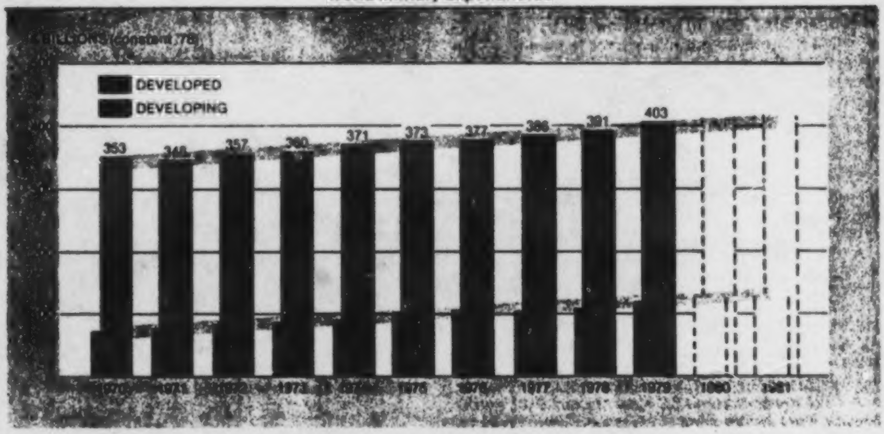


Figure 4

Regional Military Expenditures ($ billions constant '78)

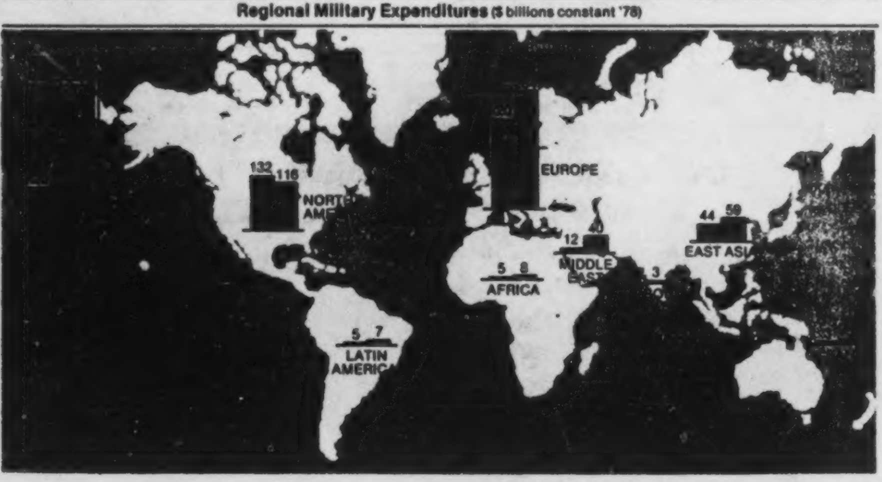


Figure 5

Military Expenditures

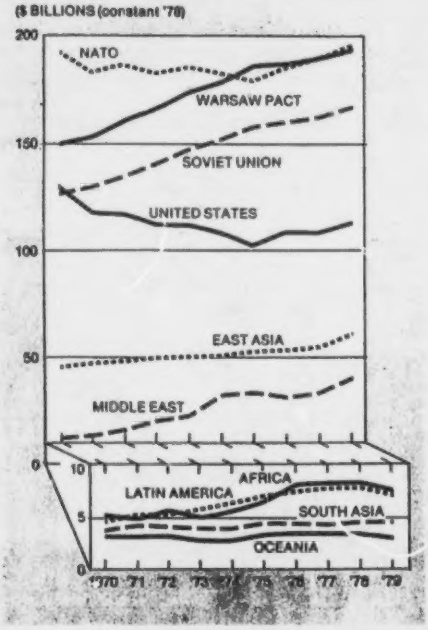


Figure 6

Shares of World Military Expenditures, 1979

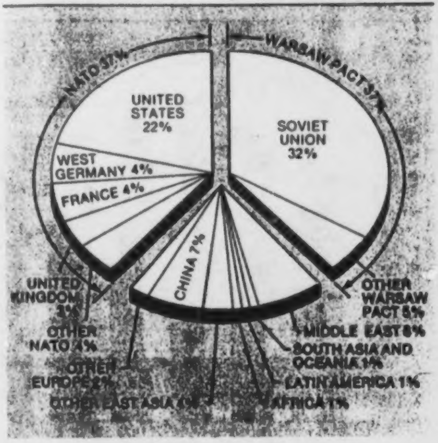
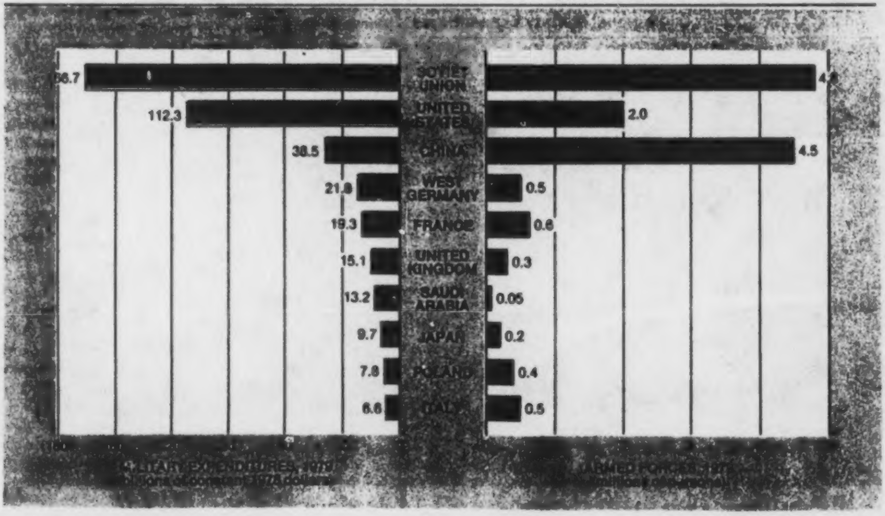


Figure 7

Leading Countries in Military Expenditures and Supported Armed Forces



Military Expenditures as a Percent of Central Government Expenditures

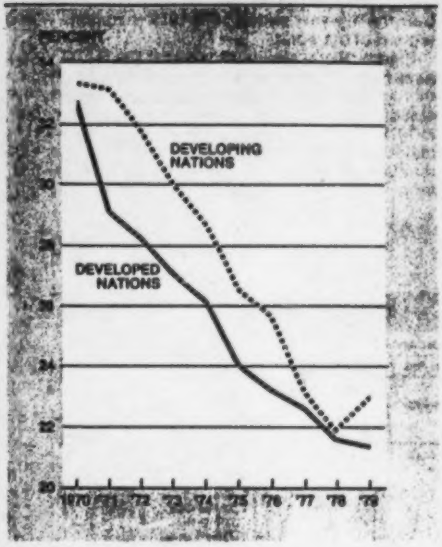


Figure 8

averaged more than 40 percent of central government expenditures.

Figure 8 shows that military expenditures as a percent of central government expenditures declined throughout the decade. This reflects the fact that nonmilitary national budget expenditures increased at a faster rate than did military expenditures.

An overview of the relationship between the level of economic development that states have attained and their military expenditures is presented in Figure 9. The chart shows states rank-ordered by military expenditure as a percent of GNP along the vertical axis, and grouped by GNP per capita along the horizontal axis. Note that, in contrast to those states in troubled parts of the world, the major well-to-do neutrals (e.g., Switzerland, Austria and Finland) spend very little on defense—with Japan spending even less on a percentage basis.

Using this same data, regional patterns are illustrated in Figure 10. Each region or alliance is represented by two concentric circles, one proportional to its population size and the other proportional to its military expenditures. Figure 10 shows that the Middle East and Warsaw Pact nations support a relatively high military burden in relation to NATO and other areas of the world. Figure 10 also shows that the more populous regions of the world budget relatively modest military expenditures while, except for Oceania, the more wealthy regions spend relatively more to support their military structure.

While military expenditures exhibited modest but steady yearly increases during the decade 1970-1979—rising a total of 22 percent—the value of the international armaments trade, as tabulated in Table II of Statistical Tables, rose a spectacular 124 percent. World trade activity in armaments and associated goods reached over twenty-three billion then-year dollars in 1979. Arms imports by developing and developed states for the period 1970 through 1979 are shown in Figure 11. The developing states continue to be the major arms importers, accounting for almost 81 percent of the world total in 1979. This steadily increasing market for arms in the developing states is responsible for the dramatic increase in total arms imports despite the nearly static demand for arms imports by developed states.

As in previous years, the Middle East was the leading arms importing region, receiving 34 percent of the world's arms deliveries in 1979 (Figure 12), down from 36 percent in 1978. East Asian states imported 13 percent of the world's total in 1979, up from eight percent in 1978. This rather abrupt East Asian increase was matched by the African states' six percent decline to 19 percent of world arms imports in 1979. Figure 13 charts arms imports and depicts associated trends by regions.

Figure 14 provides an overview of regional arms imported in 1979 compared to 1970. As in 1978, the regions with the most dramatic changes again are Africa, where imports in 1979 were almost eleven times larger than they were in 1970, and the Middle East, where 1979 imports were 3.5 times those in 1970. And, although more modest sums are involved, Latin America arms imports increased by a factor of seven.

The leading arms-importing country in 1979 was Libya, which received $2.1 billion worth of military goods and services (Figure 15). 1978's leading arms importer, Iran, was one of five states receiving more than a billion dollars worth of arms exports in 1979. Figure 15 shows the ten leading arms importers in 1979. Vietnam and India replaced Ethiopia and Algeria which were among the leading arms importers in 1978. Warsaw Pact states are the major suppliers to four of the five nations importing more than one billion dollars worth of arms and associated goods in 1979.

The two leading arms exporting states remain the Soviet Union and the United States, with Soviet 1979 exports of 9.6 billion dollars exceeding US exports of $5.1 billion by about 86 percent. (For method of evaluating Soviet arms transfers see Statistical Notes and Sources.) As shown in Figure 16, the other leading arms exporters in 1979 were France, $1.3 billion, both the United Kingdom and West Germany, $0.9 billion, and Czechoslovakia, about $0.8 billion. The Figure 17 comparison of the percentage shares of the market held by the major arms exporters shows that Warsaw Pact states, primarily the Soviet Union (44 percent) and Czechoslovakia (four percent) exported very close to one-half of the world's total arms exports in 1979.

To place international arms transfers into the context of aid and development flows, Figure 18 shows arms exported by major suppliers to developing states over the five-year period 1975-1979 as well as the amount of aid given over the same period. (See Table III, Statistical Tables.) While the value of Soviet arms delivered to Third World states exceeded substantially that of the United States, the Soviet Union only gave about one-fourth as much in economic aid. In contrast, the value of aid given by three European states, France, the United Kingdom, and West Germany, to developing states was significantly more than the value of arms exported to these states.

Table IV of the Statistical Tables provides a measure of the overall arms trade. While the caveat remains that WMEAT data in themselves do not provide a measure of the capability possessed by a particular country, Table IV does offer some illumination into this area by listing numbers of selected military hardware delivered over the five-year period 1975-1979 to nations within regions of the world.

Figure 19 graphically shows that the NATO states have provided steadily less of the total arms exports throughout the world while Warsaw Pact states have steadily supplied a greater share of the world market. In 1979 the Warsaw Pact replaced NATO states as the major exporter of military-related items. It appears that this trend will continue at least through the near term.

[illegible]

Military Expenditures as a % of GNP	GNP PER CAPITA				
	Less than $200	$200 – 499	$500 – 999	$1000 – 2999	$3000 and over
10% and over		Yemen (Aden) Egypt	Jordan Yemen (Sanaa)	Oman Syria	Qatar Israel Saudi Arabia Soviet Union
5 – 9.99%	Ethiopia	China Somalia Zimbabwe Tanzania Zambia Pakistan	Korea, North Morocco	Iraq Korea, South	Bulgaria Singapore Germany, East Greece United Arab Emirates Poland United States
2 – 4.99%	Burma Mali Upper Volta Burundi India	Kenya Zaire Madagascar Indonesia Sudan Senegal Togo Cape Verde Jamaica Benin	Congo Peru Thailand Guyana Nicaragua Nigeria Botswana Bolivia Dominican Republic	Yugoslavia Turkey Malaysia South Africa Portugal Ivory Coast Uruguay Chile Argentina Algeria	Czechoslovakia United Kingdom Hungary France Romania Kuwait Netherlands Sweden Belgium Germany, West Norway Bahrain Denmark Italy Australia Libya Switzerland
1 – 1.99%	Bangladesh Malawi Rwanda	Central African Republic Sierra Leone Cameroon Liberia	Swaziland Honduras Philippines El Salvador Uganda Papua New Guinea Paraguay	Cyprus Ecuador Tunisia Venezuela	Canada Spain Ireland New Zealand Finland Austria
Less than 1%	Nepal Sri Lanka Gambia, The	Niger Lesotho Sao Tome & Principe	Guatemala Colombia Ghana	Brazil Malta Panama Mexico Barbados Mauritius Costa Rica	Japan Luxembourg Trinidad & Tobago Iceland

Cells ranked according to MILEX/GNP.

1979 data not available for: Afghanistan; Albania; Angola; Chad; Cuba; Equatorial Guinea; Fiji; Gabon; Guinea; Guinea Bissau; Haiti; Iran; Kampuchea; Laos; Lebanon; Mauritania; Mongolia; Mozambique; Suriname; Vietnam; and Taiwan.

Figure 9

Regions and Alliances Arrayed by Military Expenditures as a Percent of GNP and [illegible]

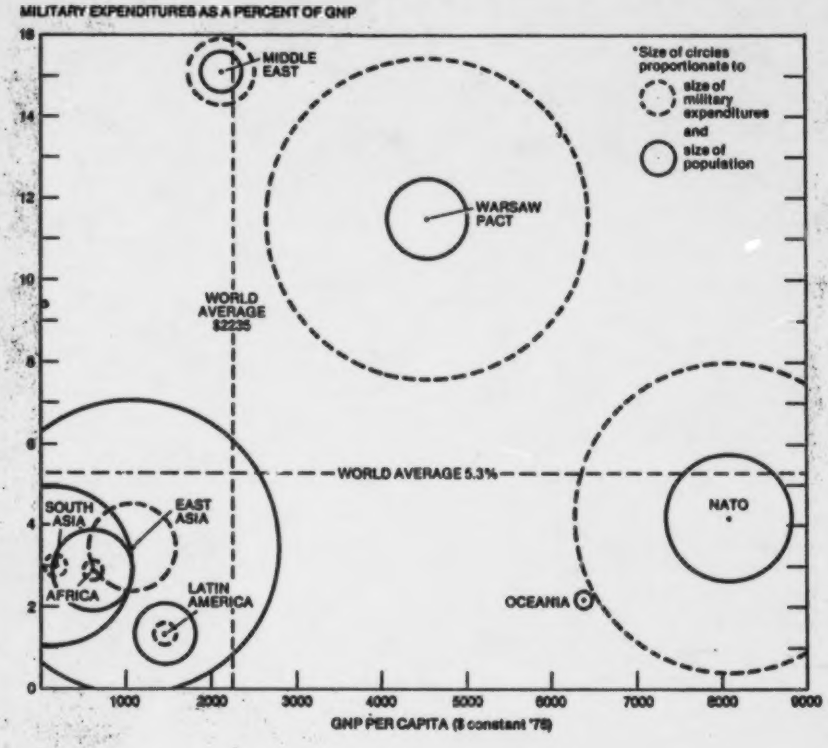
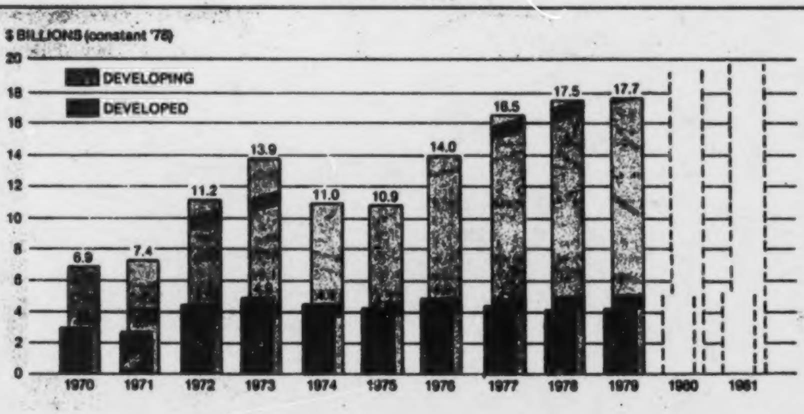


Figure 10

Figure 11

World Arms Imports



Shares of World Arms Imports, 1979

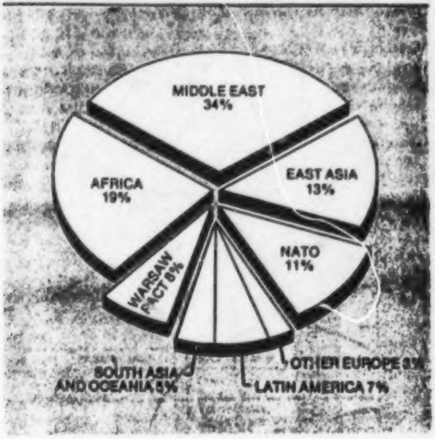
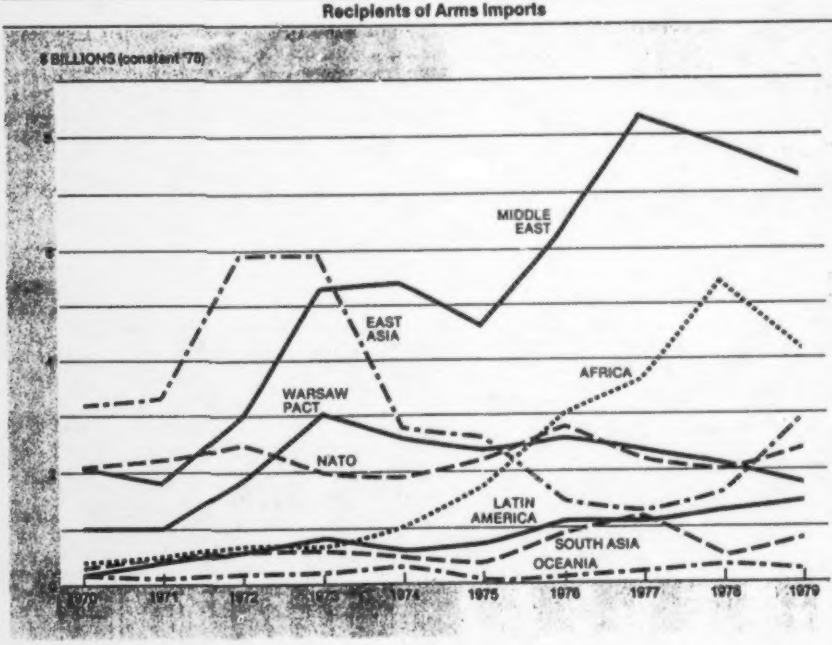


Figure 12

Figure 13

Recipients of Arms Imports



Regional Arms Imports ($ billions constant '78)

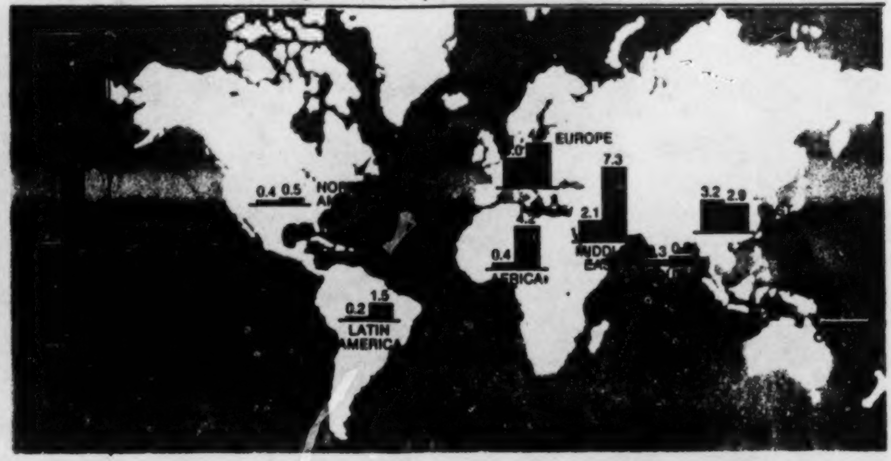

EUROPE
7.3
2.1
MIDDLE EAST
0.4
4.2
AFRICA
3.2
2.9
0.4
0.5
NORTH AMERICA
0.2
1.5
LATIN AMERICA

Figure 14

Figure 15

Leading Arms Importing States, 1979

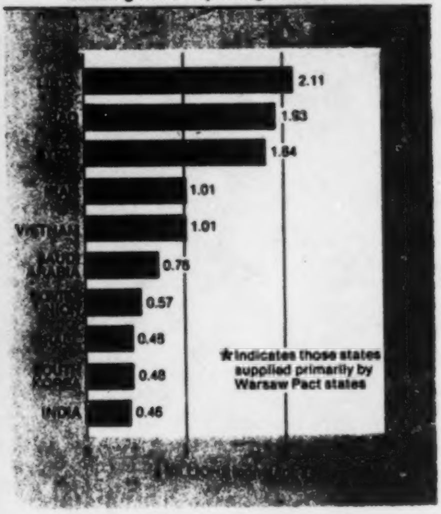
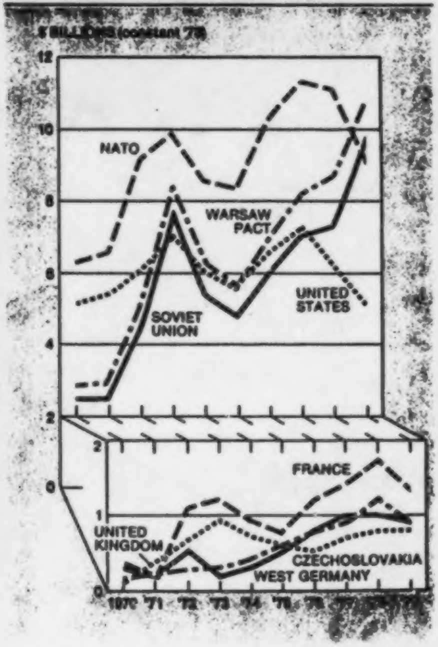


Figure 16

Arms Exports of Major Suppliers



Arms Exports, 1979 / Shares by Suppliers

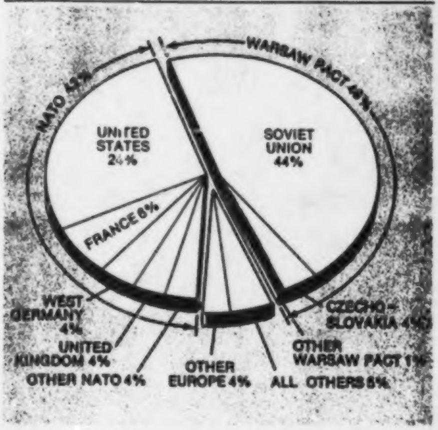
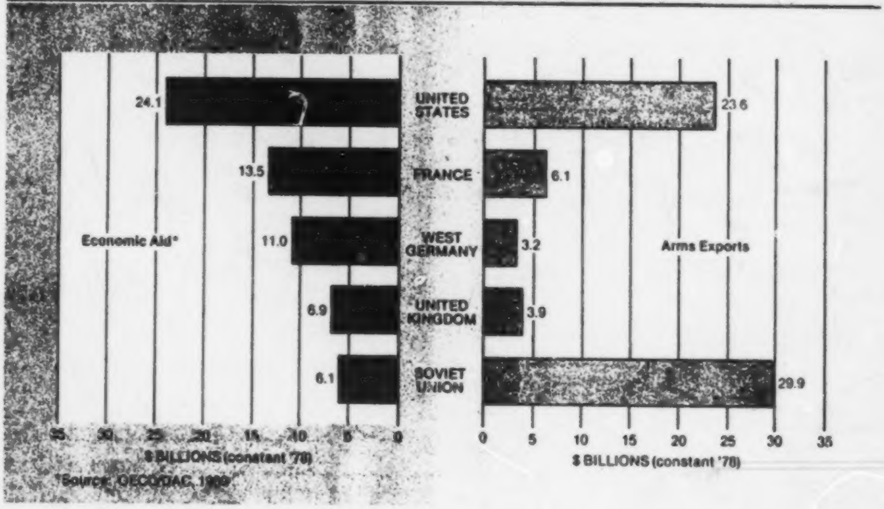


Figure 17

Figure 18

Value of Economic Aid and Arms Exports to Developing States 1975-1979



*Source: OECD/DAC, 1980

Arms Exports as a Percent of the World Arms Export Trade

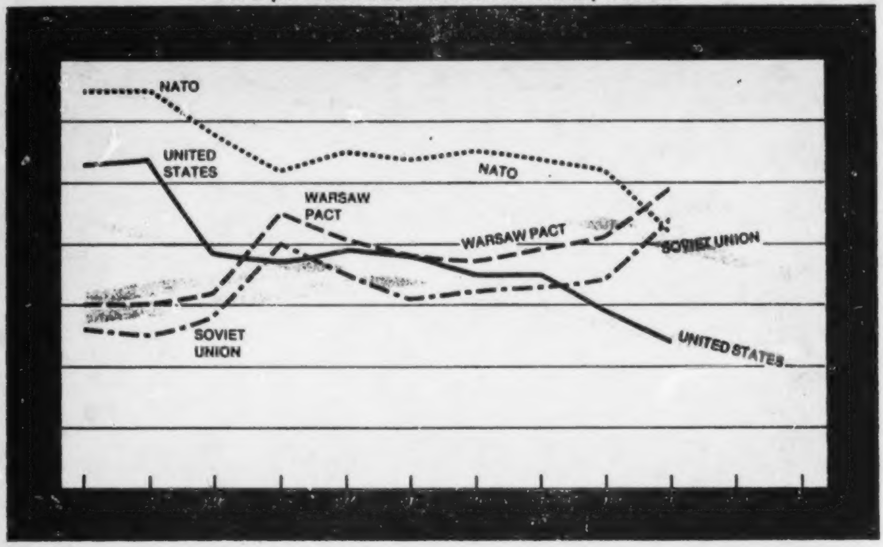


Figure 19

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
					BY COUNTRY					
AFGHANISTAN										
1970	30	49	0	0	114	188	86	142	26.3	0.0
1971	20	31	0	0	141	222	100	157	14.1	0.0
1972	20	30	0	0	164	248	122	184	12.1	0.0
1973	80	114	0	0	172	246	143	204	46.5	0.0
1974	80	104	0	0	243	317	230	300	32.9	0.0
1975	40	47	0	0	350	417	217	258	11.4	0.0
1976	50	56	0	0	261	296	291	330	19.1	0.0
1977	100	107	0	0	328	351	306	327	30.4	0.0
1978	90	90	0	0	395	395	321	321	22.7	0.0
1979	200	183	0	0	377	346	320	294	53.0	0.0
ALBANIA										
1970	20	33	0	0	159	263	91	150	12.6	0.0
1971	20	31	0	0	NA	NA	NA	NA	NA	NA
1972	5	7	0	0	NA	NA	NA	NA	NA	NA
1973	10	14	0	0	NA	NA	NA	NA	NA	NA
1974	5	6	0	0	NA	NA	NA	NA	NA	NA
1975	0	0	0	0	NA	NA	NA	NA	NA	NA
1976	5	5	0	0	NA	NA	NA	NA	NA	NA
1977	0	0	0	0	NA	NA	NA	NA	NA	NA
1978	0	0	0	0	173	173	151	151	0.0	0.0
1979	0	0	0	0	NA	NA	NA	NA	NA	NA
ALGERIA										
1970	30	49	0	0	1257	2080	1009	1669	2.3	0.0
1971	40	62	0	0	1227	1932	857	1349	3.2	0.0
1972	10	15	0	0	1493	2257	1306	1975	0.6	0.0
1973	40	57	0	0	2408	3444	1896	2712	1.6	0.0
1974	20	26	0	0	4035	5273	4683	6120	0.4	0.0
1975	90	107	0	0	6008	7167	4691	5596	1.4	0.0
1976	320	363	0	0	5082	5768	5201	5903	6.2	0.0
1977	470	503	0	0	7125	7627	5928	6345	6.5	0.0
1978	625	625	0	0	8530	8530	6347	6347	7.3	0.0
1979	420	385	0	0	8250	7580	8198	7532	5.0	0.0
ANGOLA										
1970	...	...	...	...	...	...	...	...	...	...
1971	...	...	...	...	...	...	...	...	...	...
1972	...	...	...	...	...	...	...	...	...	...
1973	...	...	...	...	...	...	...	...	...	...
1974	...	...	...	...	...	...	...	...	...	...
1975	120	143	0	0	NA	NA	NA	NA	NA	NA
1976	230	261	0	0	NA	NA	NA	NA	NA	NA
1977	200	214	0	0	720	770	800	856	27.7	0.0
1978	190	190	0	0	NA	NA	NA	NA	NA	NA
1979	100	91	0	0	NA	NA	NA	NA	NA	NA

Reproduced from U.S. Arms Control and Disarmament Agency. World military expenditures and arms transfers, 1970–1979. Washington, 1982. p. 90–130.

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
ARGENTINA										
1970	20	33	0	0	1694	2803	1773	2934	1.1	0.0
1971	10	15	0	0	1868	2941	1740	2739	0.5	0.0
1972	60	90	10	15	1905	2881	1941	2935	3.1	0.5
1973	50	71	10	14	2230	3190	3266	4672	2.2	0.3
1974	40	52	0	0	3635	4751	3931	5137	1.1	0.0
1975	30	35	0	0	3947	4708	2961	3532	0.7	0.0
1976	50	56	0	0	3033	3442	3916	4444	1.6	0.0
1977	40	42	5	5	4162	4455	5652	6050	0.9	0.1
1978	360	360	0	0	3834	3834	6400	6400	9.3	0.0
1979	480	441	10	9	6712	6167	7810	7175	7.1	0.1
AUSTRALIA										
1970	90	148	0	0	5056	8367	4771	7895	1.7	0.0
1971	40	62	10	15	5228	8232	5212	8207	0.7	0.2
1972	60	90	10	15	5158	7800	6462	9772	1.1	0.2
1973	110	157	10	14	7730	11058	9559	13674	1.4	0.1
1974	190	248	30	39	12488	16322	11025	14409	1.5	0.3
1975	30	35	120	143	11097	13237	11943	14247	0.2	1.0
1976	80	90	50	56	12389	14062	13155	14931	0.6	0.4
1977	140	149	30	32	13515	14467	13352	14292	1.0	0.2
1978	250	250	50	50	15568	15568	14416	14416	1.6	0.3
1979	180	165	30	27	18231	16750	18667	17151	0.9	0.2
AUSTRIA										
1970	10	16	0	0	3549	5873	2857	4728	0.2	0.0
1971	10	15	0	0	4195	6605	3172	4994	0.2	0.0
1972	20	30	10	15	5216	7888	3883	5872	0.3	0.3
1973	5	7	10	14	7119	10184	5283	7557	0.0	0.2
1974	5	6	5	6	9022	11791	7161	9359	0.0	0.1
1975	5	5	30	35	9394	11206	7519	8969	0.0	0.4
1976	60	68	60	68	11522	13078	8506	9654	0.5	0.7
1977	80	85	60	64	14487	15507	9808	10499	0.5	0.6
1978	50	50	200	200	16019	16019	12175	12175	0.3	1.6
1979	10	9	100	91	20256	18611	15483	14225	0.0	0.6
BAHRAIN										
1970	...	...	...	...	...	...	...	...	...	...
1971	0	0	0	0	312	491	269	423	0.0	0.0
1972	0	0	0	0	376	568	348	526	0.0	0.0
1973	0	0	0	0	516	738	479	685	0.0	0.0
1974	0	0	0	0	1127	1473	1272	1662	0.0	0.0
1975	0	0	0	0	1198	1429	1203	1435	0.0	0.0
1976	0	0	0	0	1668	1893	1516	1720	0.0	0.0
1977	0	0	0	0	2029	2172	1845	1975	0.0	0.0
1978	0	0	0	0	2045	2045	1892	1892	0.0	0.0
1979	20	18	0	0	2478	2276	2412	2216	0.8	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
BANGLADESH										
1970	...	...	...	...	...	...	...	...	...	...
1971	...	...	...	...	...	...	...	...	...	...
1972	20	30	0	0	549	830	260	393	3.6	0.0
1973	40	57	0	0	874	1250	358	512	4.5	0.0
1974	20	26	0	0	1100	1437	348	454	1.8	0.0
1975	10	11	0	0	1400	1670	327	390	0.7	0.0
1976	10	11	0	0	942	1069	401	455	1.0	0.0
1977	30	32	0	0	1194	1278	476	509	2.5	0.0
1978	5	5	0	0	1541	1541	549	549	0.3	0.0
1979	0	0	0	0	2026	1861	646	593	0.0	0.0
BARBADOS										
1970	0	0	0	0	113	187	40	66	0.0	0.0
1971	0	0	0	0	124	195	41	64	0.0	0.0
1972	0	0	0	0	141	213	44	66	0.0	0.0
1973	0	0	0	0	168	240	54	77	0.0	0.0
1974	0	0	0	0	204	266	86	112	0.0	0.0
1975	0	0	0	0	216	257	107	127	0.0	0.0
1976	0	0	0	0	236	267	86	97	0.0	0.0
1977	0	0	0	0	274	293	95	101	0.0	0.0
1978	0	0	0	0	313	313	130	130	0.0	0.0
1979	NA	NA	NA	NA	423	382	151	138	NA	NA
BELGIUM										
1970	80	132	5	8	11412	18886	11600	19197	0.7	0.0
1971	30	47	20	31	12900	20313	12726	20039	0.2	0.2
1972	20	30	50	75	15490	23425	16152	24427	0.1	0.3
1973	30	42	70	100	22074	31577	22455	32122	0.1	0.3
1974	20	26	60	78	29875	39047	28328	37025	0.0	0.2
1975	80	95	80	95	30779	36716	28802	34358	0.2	0.3
1976	110	124	160	181	35546	40346	32890	37331	0.3	0.5
1977	70	74	140	149	40406	43253	37539	40184	0.1	0.4
1978	80	80	140	140	48728	48728	45053	45053	0.1	0.3
1979	290	266	70	64	60393	55488	56249	51681	0.4	0.1
BENIN										
1970	0	0	0	0	64	105	33	54	0.0	0.0
1971	0	0	0	0	77	121	42	66	0.0	0.0
1972	0	0	0	0	93	140	36	54	0.0	0.0
1973	0	0	0	0	112	160	44	62	0.0	0.0
1974	5	6	0	0	148	193	43	56	3.3	0.0
1975	0	0	0	0	196	233	32	38	0.0	0.0
1976	0	0	0	0	213	247	38	43	0.0	0.0
1977	10	10	0	0	246	263	31	33	4.0	0.0
1978	10	10	0	0	267	267	26	26	3.7	0.0
1979	10	9	0	0	NA	NA	0	0	NA	NA

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
BOLIVIA										
1970	0	0	0	0	159	263	190	314	0.0	0.0
1971	5	7	0	0	170	267	181	285	2.9	0.0
1972	0	0	0	0	185	279	201	304	0.0	0.0
1973	10	14	0	0	229	327	261	373	4.3	0.0
1974	5	6	0	0	390	509	556	726	1.2	0.0
1975	10	11	0	0	558	665	445	530	1.7	0.0
1976	5	5	0	0	588	667	566	642	0.8	0.0
1977	5	5	0	0	666	712	634	678	0.7	0.0
1978	20	20	0	0	848	848	627	627	2.3	0.0
1979	70	64	0	0	1011	928	777	713	6.9	0.0
BOTSWANA										
1970	0	0	0	0	1	1	11	18	0.0	0.0
1971	0	0	0	0	6	9	13	20	0.0	0.0
1972	0	0	0	0	7	10	17	25	0.0	0.0
1973	0	0	0	0	4	5	40	57	0.0	0.0
1974	0	0	0	0	12	15	17	22	0.0	0.0
1975	0	0	0	0	NA	NA	NA	NA	NA	NA
1976	0	0	0	0	NA	NA	NA	NA	NA	NA
1977	10	10	0	0	252	269	206	220	3.9	0.0
1978	10	10	0	0	NA	NA	NA	NA	NA	NA
1979	5	4	0	0	384	352	383	351	1.3	0.0
BRAZIL										
1970	20	33	0	0	2849	4715	2739	4532	0.7	0.0
1971	50	78	0	0	3701	5827	2904	4572	1.3	0.0
1972	60	90	0	0	4783	7233	3991	6035	1.2	0.0
1973	120	171	0	0	6999	10012	6199	8867	1.7	0.0
1974	60	78	0	0	14168	18517	7951	10392	0.4	0.0
1975	100	119	30	35	13592	16214	8670	10342	0.7	0.3
1976	140	158	80	90	13726	15579	10128	11495	1.0	0.8
1977	100	107	20	21	13257	14191	12120	12974	0.7	0.2
1978	210	210	100	100	15054	15054	12659	12659	1.3	0.8
1979	200	183	60	55	19804	18195	15244	14006	1.0	0.4
BULGARIA										
1970	20	33	0	0	1831	3030	2004	3316	1.1	0.0
1971	20	31	0	0	2120	3338	2182	3435	0.9	0.0
1972	100	151	0	0	2585	3909	2646	4001	3.9	0.0
1973	290	414	5	7	3291	4707	3327	4759	8.8	0.2
1974	270	352	30	39	4278	5591	3790	4953	6.3	0.8
1975	220	262	30	35	5528	6594	4807	5734	4.0	0.6
1976	220	249	10	11	5559	6309	5316	6033	4.0	0.2
1977	190	203	10	10	6344	6791	6303	6747	3.0	0.2
1978	250	250	70	70	7658	7658	7485	7485	3.3	0.9
1979	320	294	50	45	8580	7883	9013	8281	3.7	0.6

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
BURMA										
1970	0	0	0	0	169	279	108	178	0.0	0.0
1971	0	0	0	0	194	305	126	198	0.0	0.0
1972	5	7	0	0	159	240	119	180	3.1	0.0
1973	5	7	0	0	143	204	141	201	3.4	0.0
1974	5	6	0	0	215	281	194	253	2.3	0.0
1975	0	0	0	0	250	298	158	188	0.0	0.0
1976	0	0	0	0	194	220	193	219	0.0	0.0
1977	10	10	0	0	274	293	207	221	3.6	0.0
1978	5	5	0	0	327	327	235	235	1.5	0.0
1979	30	27	0	0	319	293	384	352	9.4	0.0
BURUNDI										
1970	0	0	0	0	22	36	24	39	0.0	0.0
1971	0	0	0	0	30	47	20	31	0.0	0.0
1972	0	0	0	0	32	48	26	39	0.0	0.0
1973	0	0	0	0	31	44	31	44	0.0	0.0
1974	0	0	0	0	43	56	31	40	0.0	0.0
1975	10	11	0	0	62	74	32	38	16.1	0.0
1976	0	0	0	0	58	65	61	69	0.0	0.0
1977	10	10	0	0	74	79	90	96	13.5	0.0
1978	0	0	0	0	98	98	69	69	0.0	0.0
1979	10	9	0	0	153	140	105	96	6.5	0.0
CAMEROON										
1970	0	0	0	0	242	400	232	383	0.0	0.0
1971	0	0	0	0	250	393	207	326	0.0	0.0
1972	0	0	0	0	303	458	221	334	0.0	0.0
1973	0	0	0	0	335	478	369	527	0.0	0.0
1974	0	0	0	0	437	571	496	648	0.0	0.0
1975	5	5	0	0	599	714	474	565	0.8	0.0
1976	10	11	0	0	609	691	511	580	1.6	0.0
1977	10	10	0	0	783	838	704	753	1.2	0.0
1978	5	5	0	0	1056	1056	802	802	0.4	0.0
1979	0	0	0	0	1275	1171	1114	1023	0.0	0.0
CANADA										
1970	50	82	180	297	14255	23591	16747	27715	0.3	1.1
1971	30	47	190	299	16538	26041	18370	28926	0.1	1.0
1972	30	45	210	317	20020	30276	21165	32008	0.1	1.0
1973	140	200	130	186	24743	35395	26435	37816	0.5	0.5
1974	120	156	120	156	34418	44984	34509	45103	0.3	0.3
1975	160	190	80	95	36208	43193	34073	40646	0.4	0.2
1976	210	238	120	136	40356	45805	40598	46080	0.5	0.3
1977	170	181	70	74	42257	45234	43545	46613	0.4	0.2
1978	240	.240	130	130	46541	46541	48429	48429	0.5	0.3
1979	270	248	150	137	56825	52210	58183	53458	0.4	0.3

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
CAPE VERDE										
1970	...	...	...	...	...	...	...	...	...	...
1971	...	...	...	...	...	...	...	...	...	...
1972	...	...	...	...	...	...	...	...	...	...
1973	...	...	...	...	...	...	...	...	...	...
1974	...	...	...	...	...	...	...	...	...	...
1975	...	...	...	...	...	...	...	...	...	...
1976	0	0	0	0	27	30	2	2	0.0	0.0
1977	0	0	0	0	NA	NA	NA	NA	NA	NA
1978	20	20	0	0	NA	NA	NA	NA	NA	NA
1979	30	27	0	0	59	54	12	11	50.8	0.0
CENTRAL AFRICAN REPUBLIC										
1970	0	0	0	0	34	56	31	51	0.0	0.0
1971	0	0	0	0	32	50	32	50	0.0	0.0
1972	0	0	0	0	34	51	39	59	0.0	0.0
1973	0	0	0	0	52	74	37	52	0.0	0.0
1974	0	0	0	0	46	60	48	62	0.0	0.0
1975	0	0	0	0	69	82	47	56	0.0	0.0
1976	0	0	0	0	55	62	59	67	0.0	0.0
1977	0	0	0	0	63	67	80	85	0.0	0.0
1978	0	0	0	0	57	57	72	72	0.0	0.0
1979	5	4	0	0	70	64	80	73	7.1	0.0
CHAD										
1970	0	0	0	0	62	102	30	49	0.0	0.0
1971	0	0	0	0	62	97	28	44	0.0	0.0
1972	0	0	0	0	62	93	36	54	0.0	0.0
1973	0	0	0	0	82	117	38	54	0.0	0.0
1974	0	0	0	0	87	113	37	48	0.0	0.0
1975	0	0	0	0	133	158	48	57	0.0	0.0
1976	10	11	0	0	118	133	63	71	8.4	0.0
1977	5	5	0	0	NA	NA	NA	NA	NA	NA
1978	0	0	0	0	180	180	91	91	0.0	0.0
1979	0	0	0	0	NA	NA	NA	NA	NA	NA
CHILE										
1970	10	16	0	0	941	1557	1249	2067	1.0	0.0
1971	30	47	0	0	980	1543	997	1569	3.0	0.0
1972	10	15	0	0	941	1423	855	1293	1.0	0.0
1973	70	100	0	0	1098	1570	1231	1761	6.3	0.0
1974	70	91	0	0	1911	2497	2481	3242	3.6	0.0
1975	20	23	0	0	1535	1831	1661	1981	1.3	0.0
1976	130	147	0	0	1776	2015	2083	2364	7.3	0.0
1977	60	64	0	0	2414	2584	2190	2344	2.4	0.0
1978	50	50	0	0	3002	3002	2408	2408	1.6	0.0
1979	120	110	0	0	4218	3875	3763	3457	2.8	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
CHINA										
1970	0	0	200	331	2045	3384	2150	3558	0.0	9.3
1971	0	0	250	393	2145	3377	2535	3991	0.0	9.9
1972	30	45	850	1285	2585	3909	3225	4877	1.2	26.4
1973	70	100	230	329	4625	6616	5105	7302	1.5	4.5
1974	100	130	140	183	6805	8894	6740	8809	1.5	2.1
1975	110	131	180	214	6830	8147	7120	8493	1.6	2.5
1976	160	181	140	158	5580	6333	7275	8257	2.9	1.9
1977	100	107	110	117	6615	7081	8085	8654	1.5	1.4
1978	90	90	170	170	10315	10315	9895	9895	0.9	1.7
1979	180	165	110	101	14895	13685	13360	12275	1.2	0.8
COLOMBIA										
1970	10	16	0	0	843	1395	736	1218	1.1	0.0
1971	5	7	0	0	929	1462	690	1086	0.5	0.0
1972	30	45	0	0	859	1299	866	1309	3.4	0.0
1973	40	57	0	0	1062	1519	1191	1703	3.7	0.0
1974	10	13	0	0	1597	2087	1417	1852	0.6	0.0
1975	40	47	0	0	1495	1783	1465	1747	2.6	0.0
1976	0	0	0	0	1702	1931	1745	1980	0.0	0.0
1977	10	10	0	0	2028	2170	2433	2604	0.4	0.0
1978	10	10	0	0	2928	2928	3060	3060	0.3	0.0
1979	20	18	0	0	3365	3091	3381	3106	0.5	0.0
CONGO										
1970	0	0	0	0	60	99	31	51	0.0	0.0
1971	10	15	0	0	82	129	40	63	12.1	0.0
1972	0	0	0	0	143	216	52	78	0.0	0.0
1973	0	0	0	0	157	224	89	127	0.0	0.0
1974	0	0	0	0	237	309	189	247	0.0	0.0
1975	10	11	0	0	322	384	179	213	3.1	0.0
1976	5	5	0	0	294	333	181	205	1.7	0.0
1977	30	32	0	0	293	313	186	199	10.2	0.0
1978	0	0	0	0	293	293	NA	NA	0.0	NA
1979	20	18	0	0	334	306	NA	NA	5.9	NA
COSTA RICA										
1970	0	0	0	0	317	524	231	382	0.0	0.0
1971	0	0	0	0	350	551	225	354	0.0	0.0
1972	0	0	0	0	373	564	281	425	0.0	0.0
1973	0	0	0	0	455	650	344	492	0.0	0.0
1974	0	0	0	0	720	941	440	575	0.0	0.0
1975	0	0	0	0	694	827	493	588	0.0	0.0
1976	0	0	0	0	770	874	593	673	0.0	0.0
1977	0	0	0	0	1021	1092	828	886	0.0	0.0
1978	0	0	0	0	1409	1409	844	844	0.0	0.0
1979	NA	NA	NA	NA	NA	NA	925	849	NA	NA

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
CUBA										
1970	20	33	0	0	1310	2168	1050	1737	1.5	0.0
1971	30	47	0	0	1390	2188	861	1355	2.2	0.0
1972	70	105	0	0	1300	1966	840	1270	5.4	0.0
1973	70	100	0	0	1780	2546	1400	2002	3.9	0.0
1974	60	78	0	0	2690	3515	2690	3515	2.2	0.0
1975	70	83	30	35	3750	4473	3540	4222	1.9	0.8
1976	130	147	120	136	NA	NA	NA	NA	NA	NA
1977	100	107	10	10	NA	NA	NA	NA	NA	NA
1978	310	310	NA	NA	4200	4200	3600	3600	7.4	NA
1979	260	238	0	0	5000	4594	4700	4318	5.2	0.0
CYPRUS										
1970	0	0	0	0	236	390	109	180	0.0	0.0
1971	0	0	0	0	260	409	115	181	0.0	0.0
1972	0	0	0	0	317	479	134	202	0.0	0.0
1973	0	0	0	0	451	645	173	247	0.0	0.0
1974	0	0	0	0	407	532	151	197	0.0	0.0
1975	0	0	0	0	308	367	151	180	0.0	0.0
1976	0	0	0	0	432	490	256	290	0.0	0.0
1977	0	0	0	0	623	666	326	349	0.0	0.0
1978	0	0	0	0	758	758	340	340	0.0	0.0
1979	10	9	0	0	1010	928	453	416	0.9	0.0
CZECHOSLOVAKIA										
1970	80	132	110	182	3695	6115	3792	6275	2.2	2.9
1971	80	126	120	189	4010	6314	4180	6582	2.0	2.9
1972	200	302	210	317	4684	7083	4938	7467	4.3	4.3
1973	340	486	230	329	6071	8684	5988	8566	5.6	3.8
1974	320	418	330	431	7352	9609	6884	8997	4.4	4.8
1975	310	369	490	584	8874	10586	8158	9731	3.5	6.0
1976	300	340	460	522	9410	10680	8745	9926	3.2	5.3
1977	250	267	625	669	10883	11649	10011	10716	2.3	6.2
1978	110	110	800	800	12488	12488	11669	11669	0.9	6.9
1979	300	275	850	781	14371	13204	13313	12231	2.1	6.4
DENMARK										
1970	20	33	0	0	4407	7293	3356	5554	0.4	0.0
1971	40	62	0	0	4615	7267	3688	5807	0.8	0.0
1972	40	60	10	15	5088	7694	4432	6702	0.7	0.2
1973	10	14	5	7	7802	11161	6248	8938	0.1	0.1
1974	40	52	10	13	9927	12974	7719	10088	0.4	0.1
1975	30	35	0	0	10368	12368	8712	10392	0.2	0.0
1976	70	79	20	22	12427	14105	9115	10345	0.5	0.2
1977	70	74	10	10	13265	14199	10065	10774	0.5	0.1
1978	70	70	5	5	14808	14808	11882	11882	0.4	0.0
1979	30	27	0	0	16462	16962	14685	13492	0.1	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
DOMINICAN REPUBLIC										
1970	0	0	0	0	304	503	249	412	0.0	0.0
1971	0	0	0	0	358	563	243	382	0.0	0.0
1972	0	0	0	0	389	588	347	524	0.0	0.0
1973	0	0	0	0	489	699	442	632	0.0	0.0
1974	0	0	0	0	808	1056	637	832	0.0	0.0
1975	0	0	0	0	889	1060	894	1066	0.0	0.0
1976	0	0	0	0	878	996	716	812	0.0	0.0
1977	0	0	0	0	975	1043	780	835	0.0	0.0
1978	0	0	0	0	1001	1001	675	675	0.0	0.0
1979	0	0	0	0	1217	1118	867	796	0.0	0.0
ECUADOR										
1970	10	16	0	0	274	453	221	365	3.6	0.0
1971	10	15	0	0	340	535	222	349	2.9	0.0
1972	10	15	0	0	319	482	343	518	3.1	0.0
1973	20	28	0	0	397	567	548	783	5.0	0.0
1974	5	6	0	0	678	886	1135	1483	0.7	0.0
1975	60	71	0	0	987	1177	987	1177	6.0	0.0
1976	90	102	0	0	958	1087	1293	1467	9.3	0.0
1977	160	171	0	0	1508	1614	1223	1309	10.6	0.0
1978	90	90	0	0	1583	1583	1516	1516	5.6	0.0
1979	180	165	0	0	1951	1792	1975	1814	9.2	0.0
EGYPT										
1970	650	1075	0	0	787	1302	762	1261	82.5	0.0
1971	350	551	0	0	919	1447	789	1242	38.0	0.0
1972	550	831	0	0	899	1359	825	1247	61.1	0.0
1973	850	1215	0	0	917	1311	1125	1609	92.6	0.0
1974	230	300	5	6	2351	3072	1516	1981	9.7	0.3
1975	350	417	0	0	3934	4693	1402	1672	8.9	0.0
1976	150	170	0	0	3807	4321	1522	1727	3.9	0.0
1977	270	289	50	53	4816	5155	1708	1828	5.6	2.9
1978	360	360	80	80	6727	6727	1737	1737	5.3	4.6
1979	370	339	10	9	3837	3525	1840	1690	9.6	0.5
EL SALVADOR										
1970	5	8	0	0	213	352	236	390	2.3	0.0
1971	0	0	0	0	247	388	243	382	0.0	0.0
1972	0	0	0	0	278	420	301	455	0.0	0.0
1973	0	0	0	0	374	535	358	512	0.0	0.0
1974	10	13	0	0	563	735	463	605	1.7	0.0
1975	5	5	0	0	598	713	531	633	0.8	0.0
1976	0	0	0	0	740	839	743	843	0.0	0.0
1977	0	0	0	0	929	994	972	1040	0.0	0.0
1978	5	5	0	0	1027	1027	848	848	0.4	0.0
1979	30	27	0	0	1021	938	1130	1038	2.9	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars Current	ARMS IMPORTS Million dollars Constant 1978	ARMS EXPORTS Million dollars Current	ARMS EXPORTS Million dollars Constant 1978	TOTAL IMPORTS Million dollars Current	TOTAL IMPORTS Million dollars Constant 1978	TOTAL EXPORTS Million dollars Current	TOTAL EXPORTS Million dollars Constant 1978	ARMS IMPORTS / TOTAL IMPORTS %	ARMS EXPORTS / TOTAL EXPORTS %
EQUATORIAL GUINEA										
1970	0	0	0	0	8	13	3	5	0.0	0.0
1971	0	0	0	0	25	39	27	42	0.0	0.0
1972	0	0	0	0	29	43	25	37	0.0	0.0
1973	0	0	0	0	22	31	40	57	0.0	0.0
1974	0	0	0	0	11	14	13	17	0.0	0.0
1975	10	11	0	0	NA	NA	NA	NA	NA	NA
1976	0	0	0	0	12	13	37	42	0.0	0.0
1977	0	0	0	0	NA	NA	NA	NA	NA	NA
1978	10	10	0	0	NA	NA	NA	NA	NA	NA
1979	0	0	0	0	NA	NA	NA	NA	NA	NA
ETHIOPIA										
1970	10	16	0	0	172	284	122	201	5.8	0.0
1971	10	15	0	0	190	299	126	198	5.2	0.0
1972	10	15	0	0	189	285	167	252	5.2	0.0
1973	10	14	0	0	215	307	241	344	4.6	0.0
1974	10	13	0	0	285	372	269	351	3.5	0.0
1975	30	35	0	0	313	373	240	286	9.5	0.0
1976	50	56	0	0	352	399	280	317	14.2	0.0
1977	440	471	0	0	352	376	333	356	125.0	0.0
1978	1100	1100	0	0	455	455	307	307	241.7	0.0
1979	210	192	0	0	555	509	424	389	37.8	0.0
FIJI										
1970	0	0	0	0	104	172	72	119	0.0	0.0
1971	0	0	0	0	129	203	72	113	0.0	0.0
1972	0	0	0	0	159	240	79	119	0.0	0.0
1973	0	0	0	0	222	317	94	134	0.0	0.0
1974	0	0	0	0	273	356	154	201	0.0	0.0
1975	0	0	0	0	267	318	170	202	0.0	0.0
1976	0	0	0	0	263	298	135	153	0.0	0.0
1977	0	0	0	0	307	328	180	192	0.0	0.0
1978	0	0	0	0	355	355	198	198	0.0	0.0
1979	5	4	0	0	470	431	257	236	1.0	0.0
FINLAND										
1970	20	33	0	0	2636	4362	2306	3816	0.7	0.0
1971	10	15	0	0	2806	4418	2367	3727	0.3	0.0
1972	10	15	0	0	3160	4778	2913	4405	0.3	0.0
1973	5	7	0	0	4355	6230	3837	5489	0.1	0.0
1974	30	39	0	0	6810	8900	5490	7175	0.4	0.0
1975	50	59	0	0	7626	9097	5502	6563	0.6	0.0
1976	5	5	0	0	7392	8390	6342	7198	0.0	0.0
1977	10	10	0	0	7608	8144	7665	8205	0.1	0.0
1978	10	10	0	0	7866	7866	8570	8570	0.1	0.0
1979	20	18	80	73	11398	10472	11172	10264	0.1	0.7

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
FRANCE										
1970	10	16	200	331	19132	31662	18098	29951	0.0	1.1
1971	10	15	150	236	21336	33596	20811	32770	0.0	0.7
1972	20	30	725	1096	27001	40834	26451	40002	0.0	2.7
1973	20	28	850	1216	37727	53969	36659	52442	0.0	2.3
1974	20	26	700	914	52914	69159	46255	60455	0.0	1.5
1975	30	35	700	835	53964	64374	53118	63365	0.0	1.3
1976	40	45	1100	1248	64391	73086	57162	64881	0.0	1.9
1977	50	53	1300	1391	70497	75464	64997	69577	0.0	2.0
1978	70	70	1700	1700	81795	81795	79378	79378	0.0	2.1
1979	110	101	1400	1286	107008	98318	100691	92514	0.1	1.4
GABON										
1970	0	0	0	0	80	132	143	236	0.0	0.0
1971	0	0	0	0	97	152	178	280	0.0	0.0
1972	0	0	0	0	135	204	234	353	0.0	0.0
1973	0	0	0	0	160	228	382	546	0.0	0.0
1974	0	0	0	0	332	433	768	1003	0.0	0.0
1975	0	0	0	0	445	530	943	1124	0.0	0.0
1976	20	22	0	0	502	569	1135	1288	3.9	0.0
1977	10	10	0	0	716	766	1343	1437	1.3	0.0
1978	10	10	0	0	617	617	1107	1107	1.6	0.0
1979	10	9	0	0	528	485	1729	1588	1.8	0.0
GAMBIA, THE										
1970	0	0	0	0	18	29	17	28	0.0	0.0
1971	0	0	0	0	22	34	13	20	0.0	0.0
1972	0	0	0	0	25	37	19	28	0.0	0.0
1973	0	0	0	0	31	44	22	31	0.0	0.0
1974	0	0	0	0	44	57	47	61	0.0	0.0
1975	0	0	0	0	60	71	48	57	0.0	0.0
1976	5	5	0	0	74	84	35	39	6.7	0.0
1977	0	0	0	0	78	83	47	50	0.0	0.0
1978	0	0	0	0	100	100	39	39	0.0	0.0
1979	0	0	0	0	141	129	58	53	0.0	0.0
GERMANY, EAST										
1970	130	215	10	16	4923	8147	4647	7690	2.6	0.2
1971	130	204	5	7	5057	7963	5151	8111	2.6	0.1
1972	340	514	50	75	6075	9187	6336	9582	5.6	0.8
1973	490	701	50	71	8099	11585	7772	11118	6.1	0.6
1974	490	640	40	52	9797	12804	8903	11636	5.0	0.4
1975	450	536	50	59	11947	14251	10680	12740	3.8	0.5
1976	550	624	20	22	13514	15339	11645	13217	4.1	0.2
1977	500	535	90	96	15049	16109	12778	13678	3.3	0.7
1978	290	290	60	60	16452	16452	14963	14963	1.8	0.4
1979	210	192	40	36	18384	16891	16610	15261	1.1	0.2

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
GERMANY, WEST										
1970	210	347	190	314	29947	49560	34228	56645	0.7	0.6
1971	350	551	130	204	34478	54291	39062	61509	1.0	0.3
1972	675	1020	320	483	40378	61064	46736	70679	1.6	0.7
1973	625	894	120	171	54891	78523	67563	96651	1.1	0.2
1974	575	751	210	274	69661	91047	89368	116805	0.8	0.2
1975	600	715	420	501	74930	89385	90176	107572	0.8	0.5
1976	500	567	700	794	88421	100361	102162	115958	0.5	0.7
1977	410	438	900	963	101475	108625	118091	126412	0.4	0.8
1978	340	340	950	950	121754	121754	142453	142453	0.2	0.7
1979	360	330	925	849	159711	146742	171887	157929	0.2	0.5
GHANA										
1970	0	0	0	0	411	680	458	758	0.0	0.0
1971	0	0	0	0	432	680	483	760	0.0	0.0
1972	0	0	0	0	293	443	433	654	0.0	0.0
1973	0	0	0	0	453	648	630	901	0.0	0.0
1974	10	13	0	0	821	1073	731	955	1.2	0.0
1975	10	11	0	0	791	943	807	962	1.2	0.0
1976	20	22	0	0	842	955	828	939	2.3	0.0
1977	20	21	0	0	1023	1095	962	1029	1.9	0.0
1978	40	40	0	0	937	937	933	933	4.2	0.0
1979	40	36	0	0	803	737	1100	1010	4.9	0.0
GREECE										
1970	160	264	0	0	1958	3240	643	1064	8.1	0.0
1971	270	425	0	0	2098	3303	663	1044	12.8	0.0
1972	110	166	0	0	2348	3550	871	1317	4.6	0.0
1973	40	57	0	0	3477	4974	1456	2082	1.1	0.0
1974	100	130	0	0	4385	5731	2030	2653	2.2	0.0
1975	260	310	0	0	5321	6347	2278	2717	4.8	0.0
1976	525	595	5	5	6058	6876	2561	2906	8.6	0.2
1977	470	503	0	0	6854	7337	2757	2951	6.8	0.0
1978	310	310	5	5	7627	7627	3368	3368	4.0	0.1
1979	380	349	5	4	9614	8833	3885	3569	3.9	0.1
GUATEMALA										
1970	0	0	0	0	284	470	298	493	0.0	0.0
1971	10	15	0	0	304	478	290	456	3.2	0.0
1972	10	15	0	0	324	490	338	511	3.0	0.0
1973	5	7	0	0	431	616	445	636	1.1	0.0
1974	0	0	0	0	700	914	582	760	0.0	0.0
1975	10	11	0	0	733	874	641	764	1.3	0.0
1976	20	22	0	0	839	952	782	887	2.3	0.0
1977	5	5	0	0	1053	1127	1185	1268	0.4	0.0
1978	10	10	0	0	1286	1286	1115	1115	0.7	0.0
1979	10	9	0	0	1504	1381	1271	1167	0.6	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
GUINEA										
1970	0	0	0	0	53	87	41	67	0.0	0.0
1971	10	15	0	0	62	97	51	80	16.1	0.0
1972	10	15	0	0	72	108	43	65	13.8	0.0
1973	10	14	0	0	70	100	53	75	14.2	0.0
1974	10	13	0	0	75	98	99	129	13.3	0.0
1975	20	23	0	0	NA	NA	NA	NA	NA	NA
1976	10	11	0	0	NA	NA	NA	NA	NA	NA
1977	0	0	0	0	NA	NA	NA	NA	NA	NA
1978	20	20	0	0	272	272	334	334	7.3	0.0
1979	20	18	0	0	NA	NA	NA	NA	NA	NA
GUINEA-BISSAU										
1970	...	...	...	...	...	...	...	...	...	...
1971	...	...	...	...	...	...	...	...	...	...
1972	...	...	...	...	...	...	...	...	...	...
1973	...	...	...	...	...	...	...	...	...	...
1974	0	0	0	0	43	56	4	5	0.0	0.0
1975	0	0	0	0	38	45	7	8	0.0	0.0
1976	0	0	0	0	37	42	6	6	0.0	0.0
1977	0	0	0	0	37	39	13	13	0.0	0.0
1978	10	10	0	0	49	49	12	12	20.4	0.0
1979	10	9	0	0	61	56	13	11	16.3	0.0
GUYANA										
1970	0	0	0	0	134	221	136	225	0.0	0.0
1971	0	0	0	0	135	212	150	236	0.0	0.0
1972	0	0	0	0	143	216	147	222	0.0	0.0
1973	0	0	0	0	175	250	135	193	0.0	0.0
1974	0	0	0	0	255	333	271	354	0.0	0.0
1975	0	0	0	0	344	410	366	436	0.0	0.0
1976	0	0	0	0	363	412	279	316	0.0	0.0
1977	0	0	0	0	314	336	260	278	0.0	0.0
1978	0	0	0	0	260	260	295	295	0.0	0.0
1979	0	0	0	0	317	281	291	267	0.0	0.0
HAITI										
1970	0	0	0	0	55	91	43	71	0.0	0.0
1971	0	0	0	0	60	94	48	75	0.0	0.0
1972	0	0	0	0	66	104	44	66	0.0	0.0
1973	0	0	0	0	83	118	54	77	0.0	0.0
1974	0	0	0	0	125	163	80	104	0.0	0.0
1975	0	0	0	0	149	177	80	95	0.0	0.0
1976	0	0	0	0	201	228	125	141	0.0	0.0
1977	0	0	0	0	208	222	149	159	0.0	0.0
1978	0	0	0	0	221	221	152	152	0.0	0.0
1979	0	0	0	0	236	216	145	133	0.0	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
HONDURAS										
1970	0	0	0	0	221	365	182	301	0.0	0.0
1971	0	0	0	0	194	305	195	307	0.0	0.0
1972	0	0	0	0	193	291	210	317	0.0	0.0
1973	0	0	0	0	262	374	262	374	0.0	0.0
1974	0	0	0	0	391	511	295	385	0.0	0.0
1975	0	0	0	0	395	471	295	351	0.0	0.0
1976	40	45	0	0	459	521	400	454	8.7	0.0
1977	5	5	0	0	581	621	513	549	0.8	0.0
1978	5	5	0	0	700	700	597	597	0.7	0.0
1979	10	9	0	0	832	764	733	673	1.2	0.0
HUNGARY										
1970	40	66	0	0	2505	4145	2317	3834	1.6	0.0
1971	40	63	0	0	2990	4708	2500	3936	1.3	0.0
1972	70	105	10	15	3168	4791	3308	5002	2.2	0.3
1973	190	271	30	42	3886	5559	4377	6261	4.9	0.7
1974	190	248	60	78	5340	6979	4874	6370	3.6	1.2
1975	180	214	50	59	6795	8105	5694	6792	2.6	0.9
1976	210	238	60	68	7252	8231	6643	7540	2.9	0.9
1977	170	182	60	64	8558	9161	7959	8519	2.0	0.8
1978	260	260	70	70	10584	10584	8814	8814	2.5	0.8
1979	220	202	50	45	11918	10951	11117	10214	1.8	0.4
ICELAND										
1970	0	0	0	0	157	259	147	243	0.0	0.0
1971	0	0	0	0	210	330	150	236	0.0	0.0
1972	0	0	0	0	231	349	189	285	0.0	0.0
1973	0	0	0	0	359	513	290	414	0.0	0.0
1974	5	6	0	0	518	677	331	432	0.9	0.0
1975	0	0	0	0	484	577	306	365	0.0	0.0
1976	0	0	0	0	467	530	401	455	0.0	0.0
1977	0	0	0	0	605	647	512	548	0.0	0.0
1978	0	0	0	0	675	675	641	641	0.0	0.0
1979	0	0	0	0	815	748	782	718	0.0	0.0
INDIA										
1970	[illegible]	165	0	0	2124	3515	2026	3352	4.7	0.0
1971	[illegible]	377	0	0	2420	3810	2034	3202	9.9	0.0
1972	210	317	20	30	2223	3361	2448	3702	9.4	0.8
1973	190	271	0	0	3211	4593	2917	4172	5.9	0.0
1974	190	248	10	13	5136	6712	3926	5131	3.6	0.3
1975	170	202	20	23	6381	7612	4406	5256	2.6	0.5
1976	490	556	10	11	5665	6430	5551	6300	8.6	0.2
1977	725	776	30	32	6647	7115	6378	6827	10.9	0.5
1978	280	280	10	10	7929	7929	6668	6668	3.5	0.1
1979	500	459	10	9	8800	8085	6939	6375	5.6	0.1

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars Current	 Constant 1978	ARMS EXPORTS Million dollars Current	 Constant 1978	TOTAL IMPORTS Million dollars Current	 Constant 1978	TOTAL EXPORTS Million dollars Current	 Constant 1978	ARMS IMPORTS / TOTAL IMPORTS %	ARMS EXPORTS / TOTAL EXPORTS %
INDONESIA										
1970	20	33	0	0	1002	1658	1108	1833	1.9	0.0
1971	20	31	0	0	1103	1736	1234	1943	1.8	0.0
1972	10	15	0	0	1562	2362	1777	2687	0.6	0.0
1973	20	28	0	0	2729	3903	3211	4593	0.7	0.0
1974	30	39	0	0	3842	5021	7426	9705	0.7	0.0
1975	30	35	0	0	4770	5690	7102	8472	0.6	0.0
1976	80	90	0	0	5673	6439	8547	9701	1.4	0.0
1977	60	64	0	0	6230	6669	10853	11617	0.9	0.0
1978	90	90	0	0	6690	6690	11643	11643	1.3	0.0
1979	180	165	0	0	7202	6617	15590	14324	2.4	0.0
IRAN										
1970	160	264	0	0	1662	2750	2624	4342	9.6	0.0
1971	320	503	0	0	1873	2949	3825	6023	17.0	0.0
1972	525	793	0	0	2409	3643	4040	6109	21.7	0.0
1973	525	751	0	0	3393	4853	6205	8876	15.4	0.0
1974	1000	1307	40	52	5433	7101	21575	28198	18.4	0.2
1975	1200	1431	50	59	10343	12338	20211	24110	11.6	0.2
1976	2000	2270	30	34	12894	14635	23502	26675	15.5	0.1
1977	2500	2676	30	32	14070	15061	24246	25954	17.7	0.1
1978	1900	1900	30	30	10298	10298	22186	22186	18.4	0.1
1979	1100	1010	0	0	9738	8947	19130	17576	11.2	0.0
IRAQ										
1970	50	82	0	0	510	844	847	1401	9.8	0.0
1971	40	62	0	0	701	1103	1139	1793	5.7	0.0
1972	140	211	0	0	705	1066	1108	1675	19.8	0.0
1973	625	894	0	0	896	1281	1955	2796	69.7	0.0
1974	625	816	0	0	2372	3100	6600	8626	26.3	0.0
1975	675	805	0	0	4214	5027	8297	9897	16.0	0.0
1976	1000	1135	0	0	3471	3939	9272	10524	28.8	0.0
1977	1500	1605	0	0	3901	4175	9651	10331	38.4	0.0
1978	1600	1600	0	0	4212	4212	11062	11062	37.9	0.0
1979	2100	1929	0	0	6312	5799	21502	19756	33.2	0.0
IRELAND										
1970	0	0	0	0	1624	2687	1120	1853	0.0	0.0
1971	0	0	0	0	1836	2891	1313	2067	0.0	0.0
1972	5	7	0	0	2102	3178	1611	2436	0.2	0.0
1973	0	0	0	0	2791	3992	2132	3049	0.0	0.0
1974	0	0	0	0	3812	4982	2654	3468	0.0	0.0
1975	0	0	0	0	3778	4506	3193	3809	0.0	0.0
1976	0	0	0	0	4195	4761	3315	3762	0.0	0.0
1977	0	0	0	0	5394	5774	4402	4712	0.0	0.0
1978	0	0	10	10	7120	7120	3690	5690	0.0	0.2
1979	5	4	0	0	9858	9057	7175	6592	0.0	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
ISRAEL										
1970	230	380	5	8	2086	3452	779	1289	11.0	0.6
1971	260	409	0	0	2388	3760	958	1508	10.8	0.0
1972	300	453	10	15	2477	3746	1147	1734	12.1	0.9
1973	230	329	20	28	4240	6065	1449	2072	5.4	1.4
1974	950	1241	30	39	5439	7108	1825	2385	17.4	1.6
1975	725	864	50	59	5997	7153	1941	2315	12.0	2.6
1976	975	1106	140	158	5667	6432	2415	2741	17.2	5.8
1977	1100	1177	60	64	5787	6194	3084	3301	19.0	1.9
1978	925	925	110	110	7403	7403	3921	3921	12.4	2.8
1979	525	482	250	229	8600	7901	4553	4183	6.1	5.5
ITALY										
1970	50	82	30	49	14970	24774	13207	21856	0.3	0.2
1971	60	94	40	63	15968	25144	15116	23802	0.3	0.3
1972	190	287	110	166	19285	29165	18607	28139	0.9	0.6
1973	120	171	140	200	27786	39763	22223	31790	0.4	0.6
1974	100	130	220	287	41089	53703	30469	39823	0.2	0.7
1975	70	83	250	298	38367	45768	34816	41532	0.1	0.7
1976	140	158	370	420	43431	49296	37261	42292	0.3	1.0
1977	140	149	380	406	48091	51479	45305	48497	0.2	0.8
1978	150	150	650	650	56459	56459	56068	56068	0.2	1.2
1979	110	101	550	505	77962	71631	72233	66367	0.1	0.8
IVORY COAST										
1970	0	0	0	0	388	642	469	776	0.0	0.0
1971	5	7	0	0	400	629	457	719	1.2	0.0
1972	5	7	0	0	454	686	553	836	1.1	0.0
1973	5	7	0	0	711	1017	858	1227	0.7	0.0
1974	0	0	0	0	969	1266	1214	1586	0.0	0.0
1975	5	5	0	0	1127	1344	1181	1408	0.4	0.0
1976	10	11	0	0	1296	1471	1631	1851	0.7	0.0
1977	10	10	0	0	1756	1879	2157	2309	0.5	0.0
1978	70	70	0	0	2326	2326	2322	2322	3.0	0.0
1979	60	55	0	0	2491	2288	2515	2310	2.4	0.0
JAMAICA										
1970	0	0	0	0	522	863	340	562	0.0	0.0
1971	0	0	0	0	560	881	345	543	0.0	0.0
1972	0	0	0	0	610	922	376	568	0.0	0.0
1973	0	0	0	0	677	968	390	557	0.0	0.0
1974	0	0	0	0	936	1223	706	922	0.0	0.0
1975	0	0	0	0	1124	1340	852	1016	0.0	0.0
1976	0	0	0	0	913	1036	632	717	0.0	0.0
1977	0	0	0	0	860	920	746	798	0.0	0.0
1978	0	0	0	0	891	891	753	753	0.0	0.0
1979	0	0	0	0	1010	928	771	708	0.0	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars Current	ARMS IMPORTS Million dollars Constant 1978	ARMS EXPORTS Million dollars Current	ARMS EXPORTS Million dollars Constant 1978	TOTAL IMPORTS Million dollars Current	TOTAL IMPORTS Million dollars Constant 1978	TOTAL EXPORTS Million dollars Current	TOTAL EXPORTS Million dollars Constant 1978	ARMS IMPORTS / TOTAL IMPORTS %	ARMS EXPORTS / TOTAL EXPORTS %
JAPAN										
1970	70	115	10	16	18881	31247	19318	31970	0.3	0.1
1971	80	125	0	0	19772	31134	24086	37927	0.4	0.0
1972	90	136	10	15	23868	36096	29095	44001	0.3	0.0
1973	60	85	20	28	38449	55002	37081	53045	0.1	0.1
1974	80	104	20	26	62109	81177	55553	72608	0.1	0.0
1975	60	71	30	35	57839	68997	55727	66477	0.1	0.1
1976	180	204	10	11	64895	73658	67321	76412	0.2	0.0
1977	120	128	30	32	71340	76367	81084	86797	0.1	0.0
1978	170	170	80	80	79910	79910	98338	98338	0.2	0.1
1979	230	211	50	45	109815	100897	102284	93978	0.2	0.0
JORDAN										
1970	50	82	0	0	184	304	34	56	27.1	0.0
1971	50	78	0	0	215	338	32	50	23.2	0.0
1972	30	45	0	0	267	403	48	72	11.2	0.0
1973	40	57	5	7	331	473	74	105	12.0	6.8
1974	70	91	10	13	488	637	155	202	14.3	6.5
1975	70	83	20	23	732	873	153	182	9.5	13.1
1976	140	158	5	5	1022	1160	207	235	13.6	2.4
1977	120	128	0	0	1381	1478	249	266	8.6	0.0
1978	170	170	10	10	1499	1499	297	297	11.3	3.4
1979	100	91	0	0	1962	1802	402	369	5.0	0.0
KAMPUCHEA										
1970	60	99	0	0	54	89	39	64	111.1	0.0
1971	50	78	0	0	57	89	11	17	87.7	0.0
1972	110	166	0	0	80	121	7	10	137.5	0.0
1973	150	214	0	0	NA	NA	7	10	NA	0.0
1974	290	379	0	0	NA	NA	NA	NA	NA	NA
1975	300	357	0	0	NA	NA	NA	NA	NA	NA
1976	0	0	0	0	609	691	NA	NA	0.0	NA
1977	10	10	0	0	NA	NA	NA	NA	NA	NA
1978	50	50	0	0	NA	NA	NA	NA	NA	NA
1979	10	9	0	0	NA	NA	NA	NA	NA	NA
KENYA										
1970	0	0	0	0	442	731	305	504	0.0	0.0
1971	10	15	0	0	560	881	314	494	1.7	0.0
1972	10	15	0	0	554	837	371	561	1.8	0.0
1973	0	0	0	0	655	937	517	739	0.0	0.0
1974	30	39	0	0	1075	1405	661	863	2.7	0.0
1975	10	11	0	0	987	1177	647	771	1.0	0.0
1976	0	0	0	0	972	1103	825	936	0.0	0.0
1977	10	10	0	0	1285	1375	1194	1278	0.7	0.0
1978	50	50	0	0	1605	1605	1023	1023	3.1	0.0
1979	50	45	0	0	1637	1504	1106	1016	3.0	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1979	Current	Constant 1979	Current	Constant 1979	Current	Constant 1979	%	%
KOREA, NORTH										
1970	60	99	0	0	395	653	315	521	15.2	0.0
1971	170	267	0	0	575	905	335	527	29.6	0.0
1972	170	257	0	0	640	967	400	604	26.6	0.0
1973	210	300	0	0	835	1194	500	715	25.1	0.0
1974	130	169	0	0	1300	1699	720	941	10.0	0.0
1975	140	167	10	11	1090	1300	785	936	12.8	1.3
1976	80	90	80	90	850	964	605	686	9.4	13.2
1977	120	128	20	21	NA	NA	NA	NA	NA	NA
1978	70	70	90	90	902	902	967	967	7.8	9.3
1979	170	156	80	73	1300	1194	1320	1212	13.1	6.1
KOREA, SOUTH										
1970	150	248	0	0	1984	3283	835	1381	7.5	0.0
1971	220	346	0	0	2394	3769	1068	1681	9.1	0.0
1972	350	529	0	0	2522	3814	1624	2456	13.8	0.0
1973	170	243	0	0	4240	6065	3225	4613	4.0	0.0
1974	80	104	0	0	6852	8955	4460	5829	1.1	0.0
1975	190	226	5	6	7274	8677	5081	6061	2.6	0.1
1976	340	385	5	5	8774	9958	7715	8756	3.8	0.1
1977	300	321	110	117	10811	11572	10047	10755	2.7	1.1
1978	525	525	60	60	14972	14972	12718	12718	3.5	0.5
1979	525	482	180	165	20339	18687	15055	13832	2.5	1.2
KUWAIT										
1970	0	0	0	0	625	1034	1693	2801	0.0	0.0
1971	5	7	0	0	652	1026	2272	3577	0.7	0.0
1972	5	7	0	0	797	1205	2557	3867	0.6	0.0
1973	0	0	0	0	1052	1504	3321	4750	0.0	0.0
1974	0	0	0	0	1552	2028	10325	13494	0.0	0.0
1975	50	59	0	0	2390	2851	8644	10311	2.0	0.0
1976	80	90	0	0	3324	3772	9844	11173	2.4	0.0
1977	310	331	0	0	4840	5181	9801	10491	6.4	0.0
1978	300	300	0	0	4602	4602	10464	10464	6.5	0.0
1979	60	55	0	0	5360	4924	17480	16060	1.1	0.0
LAOS										
1970	70	115	0	0	114	188	7	11	61.4	0.0
1971	110	173	0	0	82	129	6	9	134.1	0.0
1972	140	211	0	0	61	92	4	6	229.5	0.0
1973	150	214	0	0	57	81	5	7	263.2	0.0
1974	130	169	0	0	52	68	10	13	250.0	0.0
1975	20	23	0	0	NA	NA	31	37	NA	0.0
1976	20	22	0	0	NA	NA	58	65	NA	0.0
1977	40	42	0	0	NA	NA	10	10	NA	0.0
1978	20	20	0	0	NA	NA	12	12	NA	0.0
1979	10	9	0	0	80	73	35	32	12.5	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
LEBANON										
1970	5	8	0	0	653	1080	192	317	0.7	0.0
1971	5	7	0	0	731	1151	247	388	0.6	0.0
1972	20	30	0	0	824	1397	377	570	2.1	0.0
1973	20	28	0	0	1291	1846	612	875	1.5	0.0
1974	10	13	0	0	2387	3132	1455	1901	0.4	0.0
1975	10	11	0	0	2048	2443	1121	1337	0.4	0.0
1976	10	11	0	0	612	694	496	563	1.6	0.0
1977	0	0	0	0	1539	1647	645	690	0.0	0.0
1978	20	20	0	NA	1400	1400	626	626	1.4	0.0
1979	20	18	0	NA	2200	2021	705	647	0.9	0.0
LESOTHO										
1970	0	0	0	0	0	0	NA	NA	NA	NA
1971	0	0	0	0	4	6	NA	NA	0.0	NA
1972	0	0	0	0	3	4	NA	NA	0.0	NA
1973	0	0	0	0	3	4	NA	NA	0.0	NA
1974	0	0	0	0	8	10	1	1	0.0	0.0
1975	0	0	0	0	NA	NA	NA	NA	NA	NA
1976	0	0	0	0	NA	NA	113	128	NA	0.0
1977	0	0	0	0	NA	NA	NA	NA	NA	NA
1978	0	0	0	0	262	262	35	35	0.0	0.0
1979	NA	NA	NA	NA	NA	NA	1	0	NA	NA
LIBERIA										
1970	0	0	0	0	150	248	236	390	0.0	0.0
1971	0	0	0	0	162	255	247	388	0.0	0.0
1972	0	0	0	0	179	270	270	408	0.0	0.0
1973	0	0	0	0	193	276	324	463	0.0	0.0
1974	0	0	0	0	288	376	400	522	0.0	0.0
1975	0	0	0	0	331	394	394	470	0.0	0.0
1976	0	0	0	0	399	452	457	518	0.0	0.0
1977	0	0	0	0	464	496	448	479	0.0	0.0
1978	0	0	0	0	481	481	486	486	0.0	0.0
1979	0	0	0	0	506	464	537	493	0.0	0.0
LIBYA										
1970	60	99	0	0	555	918	2837	4695	10.8	0.0
1971	100	157	0	0	707	1113	2885	4542	14.1	0.0
1972	160	241	5	7	1043	1577	2477	3746	15.3	0.2
1973	180	257	0	0	1813	2593	3454	4941	9.9	0.0
1974	330	431	0	0	2762	3610	7129	9317	11.9	0.0
1975	550	656	5	6	3542	4225	6042	7207	15.5	0.1
1976	1000	1135	0	0	3212	3645	8306	9427	31.1	0.0
1977	1200	1284	20	21	3732	4048	9761	10448	31.7	0.2
1978	1900	1900	10	10	4603	4603	9503	9503	41.2	0.1
1979	2300	2113	90	82	8313	7638	15236	13998	27.6	0.6

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1979	Current	Constant 1979	Current	Constant 1979	Current	Constant 1979	%	%
LUXEMBOURG										
1970	0	0	0	0	0	0	NA	NA	NA	NA
1971	0	0	0	0	0	0	NA	NA	NA	NA
1972	0	0	0	0	0	0	NA	NA	NA	NA
1973	0	0	0	0	0	0	NA	NA	NA	NA
1974	0	0	0	0	1	1	NA	NA	0.0	NA
1975	10	11	0	0	8	9	NA	NA	125.0	NA
1976	0	0	0	0	NA	NA	NA	NA	NA	NA
1977	0	0	0	0	NA	NA	NA	NA	NA	NA
1978	0	0	0	0	NA	NA	NA	NA	NA	NA
1979	0	0	0	0	NA	NA	NA	NA	NA	NA
MADAGASCAR										
1970	0	0	0	0	170	281	145	240	0.0	0.0
1971	0	0	0	0	214	337	147	231	0.0	0.0
1972	0	0	0	0	205	310	166	251	0.0	0.0
1973	0	0	0	0	203	290	203	290	0.0	0.0
1974	0	0	0	0	281	367	244	318	0.0	0.0
1975	0	0	0	0	366	436	301	358	0.0	0.0
1976	10	11	0	0	285	323	275	312	3.5	0.0
1977	5	5	0	0	347	371	338	361	1.4	0.0
1978	20	20	0	0	443	443	387	387	4.5	0.0
1979	20	18	0	0	727	668	394	362	2.7	0.0
MALAWI										
1970	0	0	0	0	99	163	60	99	0.0	0.0
1971	0	0	0	0	108	170	71	111	0.0	0.0
1972	0	0	0	0	129	195	80	121	0.0	0.0
1973	0	0	0	0	140	200	98	140	0.0	0.0
1974	0	0	0	0	188	245	120	156	0.0	0.0
1975	0	0	0	0	253	301	140	167	0.0	0.0
1976	0	0	0	0	206	233	166	188	0.0	0.0
1977	0	0	0	0	233	249	200	214	0.0	0.0
1978	5	5	0	0	338	338	185	185	1.4	0.0
1979	10	9	0	0	399	366	232	213	2.5	0.0
MALAYSIA										
1970	5	8	0	0	1418	2346	1686	2790	0.3	0.0
1971	30	47	0	0	1453	2238	1644	2588	2.0	0.0
1972	30	45	0	0	1665	2518	1722	2604	1.8	0.0
1973	40	57	0	0	2508	3587	3046	4357	1.5	0.0
1974	40	52	0	0	4144	5416	4235	5535	0.9	0.0
1975	70	83	0	0	3554	4239	3831	4570	1.9	0.0
1976	40	45	0	0	3828	4344	5295	6010	1.0	0.0
1977	60	64	0	0	4542	4862	6080	6508	1.3	0.0
1978	80	80	0	0	5929	5929	7413	7413	1.3	0.0
1979	170	156	0	0	7849	72[illegible]	11077	10177	2.1	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
MALI										
1970	0	0	0	0	47	77	35	57	0.0	0.0
1971	0	0	0	0	56	88	29	45	0.0	0.0
1972	5	7	0	0	78	118	34	51	6.4	0.0
1973	5	7	0	0	107	153	53	75	4.6	0.0
1974	0	0	0	0	180	235	65	85	0.0	0.0
1975	10	11	0	0	176	210	53	63	5.6	0.0
1976	20	22	0	0	150	170	84	95	13.3	0.0
1977	30	32	0	0	159	170	125	133	18.8	0.0
1978	60	60	0	0	203	203	94	94	29.5	0.0
1979	10	9	0	0	263	241	117	107	3.8	0.0
MALTA										
1970	0	0	0	0	161	266	39	64	0.0	0.0
1971	0	0	0	0	161	253	46	72	0.0	0.0
1972	0	0	0	0	176	266	68	102	0.0	0.0
1973	0	0	0	0	239	341	98	140	0.0	0.0
1974	0	0	0	0	361	471	134	175	0.0	0.0
1975	0	0	0	0	375	447	166	198	0.0	0.0
1976	0	0	0	0	423	480	228	258	0.0	0.0
1977	0	0	0	0	516	552	289	309	0.0	0.0
1978	5	5	0	0	575	575	342	342	0.8	0.0
1979	0	0	0	0	759	697	424	389	0.0	0.0
MAURITANIA										
1970	0	0	0	0	56	92	89	147	0.0	0.0
1971	0	0	0	0	57	89	91	143	0.0	0.0
1972	0	0	0	0	71	107	119	180	0.0	0.0
1973	0	0	0	0	128	183	155	221	0.0	0.0
1974	0	0	0	0	121	158	180	235	0.0	0.0
1975	0	0	0	0	161	192	176	210	0.0	0.0
1976	20	22	0	0	180	204	178	202	11.1	0.0
1977	40	42	0	0	207	221	156	167	19.3	0.0
1978	20	20	0	0	181	181	123	123	11.0	0.0
1979	10	9	0	0	259	238	147	135	3.8	0.0
MAURITIUS										
1970	0	0	0	0	76	125	69	114	0.0	0.0
1971	0	0	0	0	84	132	66	103	0.0	0.0
1972	0	0	0	0	119	180	106	160	0.0	0.0
1973	0	0	0	0	168	240	137	196	0.0	0.0
1974	0	0	0	0	309	403	313	409	0.0	0.0
1975	0	0	0	0	332	396	298	355	0.0	0.0
1976	0	0	0	0	360	408	265	300	0.0	0.0
1977	0	0	0	0	447	478	310	331	0.0	0.0
1978	0	0	0	0	501	501	325	325	0.0	0.0
1979	NA	NA	NA	NA	557	511	368	338	NA	NA

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS million dollars		ARMS EXPORTS million dollars		TOTAL IMPORTS million dollars		TOTAL EXPORTS million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
MEXICO										
1970	5	8	0	0	2460	4071	1403	2321	0.2	0.0
1971	5	7	0	0	2461	3875	1507	2373	0.2	0.0
1972	0	0	0	0	2719	4112	1699	2569	0.0	0.0
1973	5	7	0	0	3814	5456	2261	3234	0.1	0.0
1974	10	13	0	0	6057	7916	2988	3905	0.1	0.0
1975	20	23	0	0	6571	7838	2904	3464	0.3	0.0
1976	20	22	0	0	6028	6842	3418	3879	0.3	0.0
1977	10	10	0	0	5883	6297	4517	4835	0.1	0.0
1978	5	5	0	0	7555	7555	5958	5958	0.0	0.0
1979	10	9	0	0	12086	11104	8982	8252	0.0	0.0
MONGOLIA										
1970	0	0	0	0	230	380	85	140	0.0	0.0
1971	0	0	0	0	245	385	110	173	0.0	0.0
1972	5	7	0	0	280	423	125	189	1.8	0.0
1973	5	7	0	0	360	515	140	200	1.4	0.0
1974	5	6	0	0	365	477	180	235	1.4	0.0
1975	10	11	0	0	410	489	180	214	2.4	0.0
1976	10	11	0	0	NA	NA	NA	NA	NA	NA
1977	30	32	0	0	NA	NA	NA	NA	NA	NA
1978	50	50	0	0	NA	NA	NA	NA	NA	NA
1979	20	18	0	0	NA	NA	NA	NA	NA	NA
MOROCCO										
1970	10	16	0	0	684	1132	488	807	1.4	0.0
1971	5	7	0	0	701	1103	502	790	0.7	0.0
1972	0	0	0	0	779	1178	642	970	0.0	0.0
1973	5	7	0	0	1144	1636	910	1301	0.4	0.0
1974	20	26	0	0	1904	2488	1708	2232	1.0	0.0
1975	50	59	0	0	2567	3062	1543	1840	1.9	0.0
1976	210	238	5	5	2618	2971	1261	1431	8.0	0.4
1977	220	235	5	5	3199	3424	1302	1393	6.8	0.4
1978	460	460	0	0	2970	2970	1508	1508	15.4	0.0
1979	480	441	0	0	3678	3379	1873	1720	13.0	0.0
MOZAMBIQUE										
1970	...	...	...	...	...	...	...	...	...	...
1971	...	...	...	...	...	...	...	...	...	...
1972	...	...	...	...	...	...	...	...	...	...
1973	...	...	...	...	...	...	...	...	...	...
1974	...	...	...	...	...	...	...	...	...	...
1975	30	35	0	0	411	490	198	236	7.2	0.0
1976	10	11	0	0	300	340	150	170	3.3	0.0
1977	30	32	0	0	276	295	128	137	10.8	0.0
1978	120	120	0	0	635	635	205	205	18.8	0.0
1979	60	55	0	0	NA	NA	NA	NA	NA	NA

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
NEPAL										
1970	0	0	0	0	75	124	42	69	0.0	0.0
1971	0	0	0	0	85	133	48	75	0.0	0.0
1972	0	0	0	0	85	128	58	87	0.0	0.0
1973	0	0	0	0	103	147	63	90	0.0	0.0
1974	10	13	0	0	134	175	66	86	7.4	0.0
1975	5	5	0	0	171	204	99	118	2.9	0.0
1976	0	0	0	0	163	185	98	111	0.0	0.0
1977	0	0	0	0	168	179	81	86	0.0	0.0
1978	0	0	0	0	222	222	91	91	0.0	0.0
1979	0	0	0	0	254	233	109	100	0.0	0.0
NETHERLANDS										
1970	100	165	10	16	13426	22219	11774	19485	0.7	0.1
1971	80	125	5	7	15408	24262	13963	21987	0.5	0.0
1972	80	120	80	121	17521	26497	16791	25393	0.4	0.5
1973	20	28	80	114	24493	35038	24055	34411	0.0	0.3
1974	30	39	30	39	33691	44034	32821	42897	0.0	0.1
1975	70	83	70	83	35604	42472	35097	41867	0.1	0.2
1976	90	102	90	102	40534	46007	40214	45644	0.2	0.2
1977	160	171	60	64	46508	49785	43700	46779	0.3	0.1
1978	160	160	70	70	53833	53833	50138	50138	0.2	0.1
1979	220	202	120	110	68205	62666	63669	58498	0.3	0.2
NEW ZEALAND										
1970	20	33	0	0	1250	2068	1223	2024	1.6	0.0
1971	20	31	0	0	1350	2125	1361	2143	1.4	0.0
1972	50	75	0	0	1520	2298	1792	2710	3.2	0.0
1973	5	7	0	0	2180	3118	2598	3718	0.2	0.0
1974	10	13	0	0	3650	4770	2434	3181	0.2	0.0
1975	10	11	0	0	3150	3757	2160	2576	0.3	0.0
1976	5	5	0	0	3254	3693	2795	3172	0.1	0.0
1977	20	21	0	0	3361	3597	3196	3421	0.5	0.0
1978	10	10	0	0	3491	3491	3738	3738	0.2	0.0
1979	10	9	0	0	4553	4183	4706	4323	0.2	0.0
NICARAGUA										
1970	0	0	0	0	199	329	179	296	0.0	0.0
1971	0	0	0	0	210	330	187	294	0.0	0.0
1972	0	0	0	0	218	329	249	376	0.0	0.0
1973	0	0	0	0	327	467	278	397	0.0	0.0
1974	0	0	0	0	562	734	381	498	0.0	0.0
1975	0	0	0	0	517	616	375	447	0.0	0.0
1976	0	0	0	0	532	603	542	615	0.0	0.0
1977	10	10	0	0	762	815	633	677	1.3	0.0
1978	20	20	0	0	596	596	646	646	3.3	0.0
1979	5	4	0	0	NA	NA	NA	NA	NA	NA

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
NIGER										
1970	0	0	0	0	58	96	32	53	0.0	0.0
1971	0	0	0	0	54	85	38	59	0.0	0.0
1972	0	0	0	0	66	99	54	81	0.0	0.0
1973	0	0	0	0	86	123	62	88	0.0	0.0
1974	0	0	0	0	97	126	53	69	0.0	0.0
1975	0	0	0	0	101	120	91	108	0.0	0.0
1976	0	0	0	0	127	144	134	152	0.0	0.0
1977	5	5	0	0	NA	NA	NA	NA	NA	NA
1978	0	0	0	0	290	290	280	280	0.0	0.0
1979	30	27	0	0	555	509	494	453	5.4	0.0
NIGERIA										
1970	5	8	0	0	1059	1752	1240	2052	0.4	0.0
1971	5	7	0	0	1537	2420	1830	2881	0.3	0.0
1972	20	30	0	0	1505	2276	2178	3293	1.3	0.0
1973	20	28	0	0	1865	2668	3526	5044	1.0	0.0
1974	20	26	0	0	2776	3628	9699	12676	0.7	0.0
1975	90	107	0	0	6041	7206	7776	9276	1.4	0.0
1976	50	56	0	0	8213	9322	10085	11446	0.6	0.0
1977	10	10	5	5	11095	11876	11780	12610	0.0	0.0
1978	50	50	0	0	12844	12844	10509	10509	0.3	0.0
1979	100	91	0	0	10942	10053	17827	16379	0.9	0.0
NORWAY										
1970	40	66	0	0	3702	6126	2457	4066	1.0	0.0
1971	40	62	0	0	4085	6432	2561	4032	0.9	0.0
1972	30	45	10	15	4372	6611	3283	4965	0.6	0.3
1973	50	71	20	28	6289	8996	4726	6760	0.7	0.4
1974	40	52	30	39	8420	11005	6282	8210	0.4	0.5
1975	50	59	10	11	9705	11577	7232	8627	0.5	0.1
1976	50	56	30	34	11121	12622	7951	9024	0.4	0.4
1977	60	64	20	21	12883	13790	8880	9505	0.4	0.2
1978	60	60	30	30	11497	11497	10882	10882	0.5	0.3
1979	40	36	50	45	13705	12592	13546	12446	0.3	0.4
OMAN										
1970	10	16	0	0	18	29	197	326	55.5	0.0
1971	10	15	0	0	33	52	212	333	30.3	0.0
1972	5	7	0	0	49	74	231	349	10.2	0.0
1973	10	14	0	0	117	167	330	472	8.5	0.0
1974	10	13	0	0	393	513	1137	1486	2.5	0.0
1975	40	47	0	0	670	799	1442	1720	5.9	0.0
1976	10	11	0	0	703	797	1566	1777	1.4	0.0
1977	50	53	0	0	874	935	1573	1683	5.7	0.0
1978	270	270	0	0	977	977	1513	1513	27.6	0.0
1979	10	9	0	0	1250	1148	2162	1986	0.8	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
PAKISTAN										
1970	60	99	0	0	731	1209	398	658	8.2	0.0
1971	50	78	0	0	678	1067	467	735	7.3	0.0
1972	110	166	0	0	666	1007	675	1020	16.5	0.0
1973	130	185	0	0	971	1389	955	1366	13.3	0.0
1974	100	130	0	0	1729	2259	1108	1448	5.7	0.0
1975	100	119	5	6	2158	2574	1052	1255	4.6	0.5
1976	190	215	0	0	2181	2475	1167	1324	8.7	0.0
1977	230	246	5	5	2446	2618	1189	1272	9.4	0.4
1978	170	170	30	30	3285	3285	1475	1475	5.1	2.0
1979	190	174	5	4	4052	3723	2056	1889	4.6	0.2
PANAMA										
1970	0	0	0	0	357	590	110	182	0.0	0.0
1971	5	7	0	0	396	623	117	184	1.2	0.0
1972	0	0	0	0	440	665	123	186	0.0	0.0
1973	0	0	0	0	502	718	138	197	0.0	0.0
1974	0	0	0	0	822	1074	211	275	0.0	0.0
1975	5	5	0	0	892	1064	287	342	0.5	0.0
1976	0	0	0	0	840	953	237	269	0.0	0.0
1977	5	5	0	0	861	921	249	266	0.5	0.0
1978	0	0	0	0	941	941	245	245	0.0	0.0
1979	0	0	0	0	1185	1088	288	264	0.0	0.0
PAPUA NEW GUINEA										
1970	...	...	...	...	...	...	...	...	...	...
1971	...	...	...	...	...	...	...	...	...	...
1972	...	...	...	...	...	...	...	...	...	...
1973	...	...	...	...	...	...	...	...	...	...
1974	...	...	...	...	...	...	...	...	...	...
1975	...	...	...	...	...	...	...	...	...	...
1976	30	34	0	0	528	599	594	674	5.6	0.0
1977	20	21	0	0	675	722	723	773	2.9	0.0
1978	10	10	0	0	804	804	780	780	1.2	0.0
1979	10	9	0	0	938	861	963	884	1.0	0.0
PARAGUAY										
1970	0	0	0	0	76	125	64	105	0.0	0.0
1971	0	0	0	0	83	130	65	102	0.0	0.0
1972	0	0	0	0	82	124	86	130	0.0	0.0
1973	0	0	0	0	122	174	127	181	0.0	0.0
1974	0	0	0	0	197	257	170	222	0.0	0.0
1975	0	0	0	0	206	245	177	211	0.0	0.0
1976	5	5	0	0	220	249	182	206	2.2	0.0
1977	0	0	0	0	308	329	279	298	0.0	0.0
1978	5	5	0	0	383	383	257	257	1.3	0.0
1979	10	9	0	0	521	478	305	280	1.9	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
PERU										
1970	20	33	0	0	622	1029	1048	1734	3.2	0.0
1971	50	78	0	0	753	1185	893	1406	6.6	0.0
1972	80	120	0	0	797	1205	944	1427	10.0	0.0
1973	80	114	0	0	1019	1457	1050	1502	7.8	0.0
1974	80	104	0	0	1531	2001	1534	2005	5.2	0.0
1975	120	143	0	0	2551	3043	1292	1541	4.7	0.0
1976	260	295	0	0	2037	2312	1265	1435	12.7	0.0
1977	420	449	0	0	1911	2045	1603	1716	21.9	0.0
1978	160	160	0	0	1960	1960	1949	1949	8.1	0.0
1979	120	110	0	0	2146	1971	3532	3245	5.5	0.0
PHILIPPINES										
1970	10	16	0	0	1236	2045	1041	1722	0.8	0.0
1971	20	31	0	0	1325	2086	1098	1729	1.5	0.0
1972	10	15	0	0	1419	2146	1101	1665	0.7	0.0
1973	20	28	0	0	1800	2575	1826	2612	1.1	0.0
1974	30	39	0	0	3471	4536	2718	3552	0.8	0.0
1975	40	47	0	0	3756	4480	2270	2707	1.0	0.0
1976	60	68	0	0	3942	4474	2515	2854	1.5	0.0
1977	50	53	0	0	4270	4570	3096	3314	1.1	0.0
1978	50	50	0	0	5144	5144	3337	3337	0.9	0.0
1979	50	45	0	0	6611	6074	4533	4164	0.7	0.0
POLAND										
1970	120	198	150	248	3608	5971	3548	5871	3.3	4.2
1971	120	189	170	267	4038	6358	3872	6097	3.0	4.4
1972	260	393	140	211	5350	8090	4948	7483	4.9	2.8
1973	410	586	230	329	7902	11304	6471	9257	5.2	3.6
1974	360	470	190	248	10429	13630	8260	10795	3.5	2.3
1975	350	417	170	202	12752	15212	10510	12537	2.7	1.6
1976	390	442	330	374	13823	15689	10969	12450	2.8	3.0
1977	370	396	290	310	14767	15807	14527	15550	2.5	2.0
1978	160	160	370	370	16513	16513	14527	14527	1.0	2.5
1979	180	165	260	238	18167	16691	16864	15494	1.0	1.5
PORTUGAL										
1970	60	99	0	0	1583	2619	950	1572	3.7	0.0
1971	20	31	0	0	1862	2932	1073	1689	1.0	0.0
1972	10	15	5	7	2250	3402	1307	1976	0.4	0.4
1973	0	0	0	0	3072	4394	1862	2663	0.0	0.0
1974	20	26	0	0	4684	6122	2293	3004	0.4	0.0
1975	50	59	0	0	3841	4582	1939	2313	1.3	0.0
1976	40	45	30	34	4221	4791	1811	2055	0.9	1.7
1977	10	10	60	64	4952	5301	2023	2165	0.2	3.0
1978	50	50	10	10	5237	5237	2414	2414	0.9	0.4
1979	20	18	20	18	6534	6003	3480	3197	0.3	0.6

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
QATAR										
1970	...	...	...	...	...	...	...	...	...	...
1971	...	...	...	...	...	...	...	...	...	...
1972	0	0	0	0	140	211	397	600	0.0	0.0
1973	0	0	0	0	196	280	619	885	0.0	0.0
1974	0	0	0	0	271	354	2016	2634	0.0	0.0
1975	10	11	0	0	413	492	1809	2158	2.4	0.0
1976	0	0	0	0	817	927	2209	2507	0.0	0.0
1977	30	32	0	0	1226	1312	1992	2132	2.4	0.0
1978	10	10	0	0	1185	1185	2374	2374	0.8	0.0
1979	20	18	0	0	1424	1308	3755	3450	1.4	0.0
ROMANIA										
1970	40	66	0	0	1960	3243	1851	3063	2.0	0.0
1971	40	63	0	0	2100	3306	2100	3306	1.9	0.0
1972	70	105	50	75	2625	3969	2600	3932	2.7	1.9
1973	140	200	30	42	3490	4992	3725	5328	4.0	0.8
1974	160	209	50	65	5111	6680	4840	6325	3.1	1.0
1975	170	202	30	35	5418	6463	5420	6465	3.1	0.6
1976	140	158	20	22	6062	6880	6175	7008	2.3	0.3
1977	160	171	40	42	7060	7557	7064	7561	2.3	0.6
1978	250	250	70	70	8926	8926	8093	8093	2.8	0.9
1979	150	137	70	64	11168	10261	9949	9141	1.3	0.7
RWANDA										
1970	0	0	0	0	28	48	25	41	0.0	0.0
1971	0	0	0	0	33	52	22	34	0.0	0.0
1972	0	0	0	0	35	52	19	28	0.0	0.0
1973	0	0	0	0	34	48	34	48	0.0	0.0
1974	0	0	0	0	56	75	36	47	0.0	0.0
1975	0	0	0	0	99	118	42	50	0.0	0.0
1976	5	5	0	0	105	119	80	90	4.7	0.0
1977	0	0	0	0	123	131	92	98	0.0	0.0
1978	10	10	0	0	125	125	122	122	8.0	0.0
1979	5	4	0	0	155	142	203	186	3.2	0.0
SAO TOME AND PRINCIPE										
1970	...	...	...	...	...	...	...	...	...	...
1971	...	...	...	...	...	...	...	...	...	...
1972	...	...	...	...	...	...	...	...	...	...
1973	...	...	...	...	...	...	...	...	...	...
1974	...	...	...	...	...	...	...	...	...	...
1975	...	...	...	...	...	...	...	...	...	...
1976	0	0	0	0	10	11	8	9	0.0	0.0
1977	0	0	0	0	14	15	23	24	0.0	0.0
1978	0	0	0	0	NA	NA	NA	NA	NA	NA
1979	0	0	0	0	NA	NA	NA	NA	NA	NA

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
SAUDI ARABIA										
1970	30	49	0	0	711	1176	2360	3905	4.2	0.0
1971	20	31	0	0	818	1288	3478	5476	2.4	0.0
1972	100	151	0	0	1136	1718	4560	6896	8.8	0.0
1973	80	114	0	0	1975	2825	7747	11082	4.0	0.0
1974	340	444	5	6	2860	3738	31242	40833	11.8	0.0
1975	250	298	10	11	4214	5027	27996	33397	5.9	0.0
1976	440	499	0	0	8695	9869	36437	41357	5.0	0.0
1977	925	990	10	10	14656	15688	41210	44114	6.3	0.0
1978	1100	1100	30	30	20422	20422	37935	37935	5.3	0.1
1979	825	758	250	229	25396	23333	59334	54515	3.2	0.4
SENEGAL										
1970	0	0	0	0	194	321	152	251	0.0	0.0
1971	0	0	0	0	219	344	125	196	0.0	0.0
1972	0	0	0	0	280	423	216	326	0.0	0.0
1973	0	0	0	0	361	516	196	280	0.0	0.0
1974	0	0	0	0	498	650	391	511	0.0	0.0
1975	0	0	0	0	583	695	461	549	0.0	0.0
1976	0	0	0	0	637	723	485	550	0.0	0.0
1977	10	10	0	0	763	816	622	665	1.3	0.0
1978	20	20	0	0	NA	NA	NA	NA	NA	NA
1979	10	9	0	0	NA	NA	NA	NA	NA	NA
SIERRA LEONE										
1970	0	0	0	0	116	192	100	165	0.0	0.0
1971	0	0	0	0	113	177	98	154	0.0	0.0
1972	0	0	0	0	119	180	117	176	0.0	0.0
1973	0	0	0	0	156	223	129	184	0.0	0.0
1974	0	0	0	0	221	288	144	188	0.0	0.0
1975	0	0	0	0	185	220	118	140	0.0	0.0
1976	0	0	0	0	153	173	99	112	0.0	0.0
1977	0	0	0	0	181	193	136	145	0.0	0.0
1978	0	0	0	0	278	278	154	154	0.0	0.0
1979	0	0	0	0	NA	NA	146	134	NA	0.0
SINGAPORE										
1970	20	33	0	0	2461	4072	1554	2571	0.8	0.0
1971	20	31	0	0	2843	4476	1763	2776	0.7	0.0
1972	50	75	10	15	3398	5138	2191	3313	1.4	0.5
1973	50	71	0	0	5147	7363	3667	5245	0.9	0.0
1974	20	26	0	0	8380	10952	5810	7593	0.2	0.0
1975	60	71	10	11	8133	9702	5376	6413	0.7	0.2
1976	30	34	20	22	9070	10294	6585	7474	0.3	0.3
1977	50	53	10	10	10471	11208	8241	8821	0.4	0.1
1978	30	30	10	10	13049	13049	10134	10134	0.2	0.1
1979	100	91	10	9	17636	16203	14233	13077	0.5	0.1

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
SOMALIA										
1970	10	16	0	0	45	74	31	51	22.2	0.0
1971	0	0	0	0	63	99	35	55	0.0	0.0
1972	20	30	0	0	75	113	43	65	26.6	0.0
1973	40	57	0	0	102	145	54	77	39.2	0.0
1974	90	117	0	0	130	169	62	81	69.2	0.0
1975	70	83	0	0	155	184	89	106	45.1	0.0
1976	100	113	0	0	156	177	95	107	64.1	0.0
1977	80	85	0	0	228	244	63	67	35.0	0.0
1978	170	170	0	0	241	241	107	107	70.5	0.0
1979	30	27	0	0	394	362	106	97	7.6	0.0
SOUTH AFRICA										
1970	40	66	0	0	3843	6360	3355	5552	1.0	0.0
1971	30	47	0	0	4364	6871	3509	5525	0.6	0.0
1972	130	196	5	7	3948	5970	4197	6347	3.2	0.1
1973	80	114	5	7	5163	7385	6114	8746	1.5	0.1
1974	100	130	0	0	7856	10267	8760	11449	1.2	0.0
1975	130	155	0	0	8293	9892	8959	10687	1.5	0.0
1976	180	204	5	5	7285	8268	7976	9053	2.4	0.1
1977	130	139	50	53	6270	6711	9987	10690	2.0	0.5
1978	60	60	5	5	7614	7614	12875	12875	0.7	0.0
1979	20	18	60	55	8991	8260	18402	16907	0.2	0.3
SOVIET UNION										
1970	200	331	1500	2482	11720	19396	12787	21161	1.7	11.7
1971	200	314	1600	2519	12467	19631	13792	21717	1.6	11.6
1972	240	363	2800	4385	16104	24354	15409	23303	1.5	18.8
1973	220	314	5300	7581	20980	30012	21332	30516	1.0	24.8
1974	210	274	4100	5358	24861	32493	27374	35778	0.8	15.0
1975	300	357	4000	4771	37070	44221	33401	39844	0.8	12.0
1976	500	567	5300	6015	38212	43372	37269	42302	1.3	14.2
1977	600	642	6500	6958	40926	43809	45227	48414	1.5	14.4
1978	800	800	7300	7300	50795	50795	52395	52395	1.6	13.9
1979	625	574	10400	9558	57961	53254	64913	59641	1.1	16.0
SPAIN										
1970	80	132	10	16	4747	7856	2388	3952	1.6	0.4
1971	90	141	20	31	5006	7882	2962	4664	1.7	0.7
1972	80	120	10	15	6829	10327	3817	5772	1.1	0.3
1973	110	157	10	14	9671	13834	5199	7437	1.1	0.2
1974	100	130	20	26	15427	20163	7091	9268	0.6	0.3
1975	160	190	80	95	16264	19401	7691	9174	0.9	1.0
1976	220	249	90	102	17474	19833	8730	9908	1.2	1.0
1977	300	321	40	42	17835	19091	10223	10943	1.6	0.4
1978	160	160	60	60	18713	18713	13115	13115	0.8	0.5
1979	200	183	60	55	25438	23372	18208	16729	0.7	0.3

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1979	Current	Constant 1979	Current	Constant 1979	Current	Constant 1979	%	%
SRI LANKA										
1970	0	0	0	0	386	638	342	566	0.0	0.0
1971	10	15	0	0	354	557	344	541	2.8	0.0
1972	10	15	0	0	366	553	337	509	2.7	0.0
1973	10	14	0	0	429	613	410	586	2.3	0.0
1974	0	0	0	0	720	941	527	688	0.0	0.0
1975	0	0	0	0	753	898	566	675	0.0	0.0
1976	10	11	0	0	579	657	570	647	1.7	0.0
1977	0	0	0	0	696	745	754	807	0.0	0.0
1978	0	0	0	0	969	969	845	845	0.0	0.0
1979	10	9	0	0	1466	1347	981	901	0.6	0.0
SUDAN										
1970	40	66	0	0	288	476	298	493	13.8	0.0
1971	5	7	0	0	355	559	330	519	1.4	0.0
1972	20	30	0	0	353	533	360	544	5.6	0.0
1973	10	14	0	0	436	623	437	625	2.2	0.0
1974	30	39	0	0	656	857	350	457	4.5	0.0
1975	0	0	0	0	956	1140	438	522	0.0	0.0
1976	50	56	0	0	980	1112	554	628	5.1	0.0
1977	160	171	0	0	1059	1133	661	707	15.1	0.0
1978	110	110	0	0	1194	1194	536	536	9.2	0.0
1979	80	73	0	0	1110	1019	535	491	7.2	0.0
SURINAME										
1970	...	...	...	...	...	...	...	...	...	...
1971	...	...	...	...	...	...	...	...	...	...
1972	...	...	...	...	...	...	...	...	...	...
1973	...	...	...	...	...	...	...	...	...	...
1974	...	...	...	...	...	...	...	...	...	...
1975	0	0	0	0	262	312	277	330	0.0	0.0
1976	0	0	0	0	293	332	251	284	0.0	0.0
1977	0	0	0	0	396	423	308	329	0.0	0.0
1978	0	0	0	0	NA	NA	NA	NA	NA	NA
1979	0	0	0	0	420	385	440	404	0.0	0.0
SWAZILAND										
1970	0	0	0	0	3	5	52	86	0.0	0.0
1971	0	0	0	0	4	6	58	91	0.0	0.0
1972	0	0	0	0	9	13	61	92	0.0	0.0
1973	0	0	0	0	6	8	69	98	0.0	0.0
1974	0	0	0	0	5	6	105	137	0.0	0.0
1975	0	0	0	0	NA	NA	NA	NA	NA	NA
1976	0	0	0	0	NA	NA	NA	NA	NA	NA
1977	0	0	0	0	NA	NA	NA	NA	NA	NA
1978	0	0	0	0	231	231	184	184	0.0	0.0
1979	0	0	0		231	212	305	280	0.0	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
SWEDEN										
1970	10	16	10	16	7007	11596	6795	11245	0.1	0.1
1971	5	7	50	78	7082	11151	7478	11775	0.0	0.7
1972	20	30	50	75	8110	12264	8769	13261	0.2	0.6
1973	20	28	10	14	10907	15602	12201	17454	0.1	0.1
1974	20	26	70	91	16683	21804	15939	20832	0.1	0.4
1975	20	23	90	107	17450	20816	17384	20737	0.1	0.5
1976	40	45	50	56	19628	22278	18435	20924	0.2	0.3
1977	60	64	50	53	20140	21559	19082	20426	0.2	0.3
1978	60	60	110	110	20589	20589	21790	21790	0.2	0.5
1979	70	64	110	101	28625	26300	27585	25345	0.2	0.4
SWITZERLAND										
1970	30	49	0	0	6374	10548	5063	8379	0.4	0.0
1971	5	7	10	15	7191	11323	5738	9035	0.0	0.2
1972	30	45	50	75	8468	12806	6842	10347	0.3	0.7
1973	50	71	40	57	11621	16624	9525	13625	0.4	0.4
1974	50	65	60	78	14445	18875	11934	15597	0.3	0.5
1975	50	59	150	178	13303	15869	12953	15451	0.3	1.2
1976	80	90	240	272	14775	16770	14835	16838	0.5	1.6
1977	70	74	310	331	17940	19204	17614	18855	0.3	1.8
1978	80	80	280	280	23804	23804	23561	23561	0.3	1.2
1979	300	275	420	385	29356	26972	26538	24383	1.0	1.6
SYRIA										
1970	60	99	0	0	361	597	203	336	16.6	0.0
1971	110	173	0	0	439	691	207	326	25.0	0.0
1972	280	423	0	0	540	816	298	450	51.8	0.0
1973	1300	1859	0	0	613	876	351	502	212.0	0.0
1974	825	1078	0	0	1230	1607	784	1024	67.0	0.0
1975	380	453	5	6	1685	2010	930	1109	22.5	0.5
1976	625	709	0	0	2375	2695	1070	1214	26.3	0.0
1977	650	695	0	0	2674	2862	1070	1145	24.3	0.0
1978	900	900	0	0	2459	2459	1060	1060	36.6	0.0
1979	2000	1837	0	0	3329	3058	1644	1510	60.0	0.0
TANZANIA										
1970	5	8	0	0	318	526	252	417	1.5	0.0
1971	30	47	0	0	381	599	279	439	7.8	0.0
1972	10	15	0	0	403	609	324	490	2.4	0.0
1973	20	28	0	0	497	711	367	525	4.0	0.0
1974	5	6	0	0	753	984	403	526	0.6	0.0
1975	10	11	0	0	774	923	370	441	1.2	0.0
1976	50	56	0	0	639	725	490	556	7.8	0.0
1977	60	64	0	0	750	802	547	585	8.0	0.0
1978	80	80	0	0	1157	1157	473	473	6.9	0.0
1979	240	220	0	0	1100	1010	544	499	21.8	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
THAILAND										
1970	30	49	0	0	1299	2149	710	1175	2.3	0.0
1971	40	62	0	0	1288	2028	831	1308	3.1	0.0
1972	70	105	0	0	1484	2244	1081	1634	4.7	0.0
1973	100	143	0	0	2049	2931	1564	2237	4.8	0.0
1974	40	52	0	0	3143	4107	2444	3154	1.2	0.0
1975	40	47	0	0	3280	3912	2208	2634	1.2	0.0
1976	80	90	0	0	3572	4054	2980	3382	2.2	0.0
1977	50	53	0	0	4616	4941	3490	3735	1.0	0.0
1978	120	120	0	0	5356	5356	4085	4085	2.2	0.0
1979	130	119	0	0	7158	6576	5304	4873	1.8	0.0
TOGO										
1970	0	0	0	0	65	107	55	91	0.0	0.0
1971	0	0	0	0	70	110	49	77	0.0	0.0
1972	0	0	0	0	85	128	50	75	0.0	0.0
1973	0	0	0	0	101	144	61	87	0.0	0.0
1974	0	0	0	0	120	156	189	247	0.0	0.0
1975	10	11	0	0	174	207	126	150	5.7	0.0
1976	20	22	0	0	185	210	105	119	10.8	0.0
1977	10	10	0	0	284	304	159	170	3.5	0.0
1978	10	10	0	0	447	447	240	240	2.2	0.0
1979	0	0	0	0	448	411	290	266	0.0	0.0
TRINIDAD AND TOBAGO										
1970	0	0	0	0	543	898	482	797	0.0	0.0
1971	0	0	0	0	667	1050	527	829	0.0	0.0
1972	0	0	0	0	755	1141	558	843	0.0	0.0
1973	0	0	0	0	785	1123	698	998	0.0	0.0
1974	0	0	0	0	1847	2414	2037	2662	0.0	0.0
1975	0	0	0	0	1471	1754	1773	2115	0.0	0.0
1976	0	0	0	0	1977	2244	2213	2511	0.0	0.0
1977	0	0	0	0	1809	1936	2180	2333	0.0	0.0
1978	0	0	0	0	1886	1886	1997	1997	0.0	0.0
1979	0	0	0	0	1945	1787	2476	2274	0.0	0.0
TUNISIA										
1970	10	16	0	0	306	506	183	302	3.2	0.0
1971	5	7	0	0	347	546	219	344	1.4	0.0
1972	10	15	0	0	466	704	315	476	2.1	0.0
1973	5	7	0	0	683	977	421	602	0.7	0.0
1974	10	13	0	0	1128	1474	921	1203	0.8	0.0
1975	10	11	0	0	1424	1698	856	1021	0.7	0.0
1976	10	11	0	0	1529	1735	788	894	0.6	0.0
1977	50	53	0	0	1825	1953	929	994	2.7	0.0
1978	5	5	0	0	2138	2138	1126	1126	0.2	0.0
1979	90	82	0	0	2830	2600	1766	1622	3.1	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
TURKEY										
1970	250	413	5	8	948	1568	588	973	26.3	0.9
1971	260	409	0	0	1171	1843	677	1066	22.2	0.0
1972	150	226	10	15	1563	2363	885	1338	9.5	1.1
1973	50	71	10	14	2086	2984	1317	1884	2.3	0.8
1974	150	196	0	0	3778	4937	1532	2002	3.9	0.0
1975	220	262	5	6	4739	5653	1401	1671	4.6	0.4
1976	320	363	10	11	5129	5821	1960	2224	6.2	0.5
1977	140	149	0	0	5796	6204	1753	1876	2.4	0.0
1978	220	220	10	10	4600	4600	2288	2288	4.7	0.4
1979	210	192	10	9	5070	4658	2261	2077	4.1	0.4
UGANDA										
1970	0	0	0	0	172	284	282	466	0.0	0.0
1971	0	0	0	0	250	393	260	409	0.0	0.0
1972	5	7	0	0	162	245	283	428	3.0	0.0
1973	5	7	0	0	163	233	291	416	3.0	0.0
1974	10	13	0	0	210	274	315	411	4.7	0.0
1975	70	83	0	0	200	238	257	306	35.0	0.0
1976	30	34	0	0	169	191	360	408	17.7	0.0
1977	5	5	0	0	247	264	587	628	2.0	0.0
1978	20	20	0	0	255	255	350	350	7.8	0.0
1979	0	0	0	0	230	211	427	392	0.0	0.0
UNITED ARAB EMIRATES										
1970	...	...	...	...	...	...	...	...	...	...
1971	...	...	...	...	...	...	...	...	...	...
1972	10	15	0	0	482	728	1082	1636	2.0	0.0
1973	10	14	0	0	821	1174	1807	2585	1.2	0.0
1974	50	65	5	6	1705	2228	6392	8354	2.9	0.1
1975	30	35	5	6	2669	3183	6977	8323	1.1	0.1
1976	100	113	0	0	3327	3776	8663	9832	3.0	0.0
1977	110	117	0	0	5048	5403	9576	10250	2.1	0.0
1978	30	30	0	0	5364	5364	9129	9129	0.5	0.0
1979	140	128	0	0	6952	6387	13574	12471	2.0	0.0
UNITED KINGDOM										
1970	50	82	80	132	21891	36394	19608	32450	0.2	0.4
1971	70	110	180	283	24301	38265	22633	35639	0.2	0.8
1972	110	166	460	695	28230	42692	24745	37422	0.3	1.9
1973	90	128	600	858	39371	56321	31032	44392	0.2	1.9
1974	90	117	550	718	55018	71909	39396	51491	0.1	1.4
1975	90	107	525	626	54159	64607	44523	53112	0.1	1.2
1976	240	272	675	766	56605	64249	46696	53002	0.4	1.4
1977	140	149	875	936	64520	69066	58205	62306	0.2	1.5
1978	160	160	1200	1200	78586	78586	71705	71705	0.2	1.7
1979	280	257	1000	918	102949	94589	91016	83625	0.2	1.1

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars Current	ARMS IMPORTS Million dollars Constant 1978	ARMS EXPORTS Million dollars Current	ARMS EXPORTS Million dollars Constant 1978	TOTAL IMPORTS Million dollars Current	TOTAL IMPORTS Million dollars Constant 1978	TOTAL EXPORTS Million dollars Current	TOTAL EXPORTS Million dollars Constant 1978	ARMS IMPORTS / TOTAL IMPORTS %	ARMS EXPORTS / TOTAL EXPORTS %
UNITED STATES										
1970	190	314	3100	5130	42429	70217	43224	71533	0.4	7.2
1971	150	236	3400	5353	48342	76122	44130	69489	0.3	7.7
1972	160	241	4000	6049	58862	89018	49758	75250	0.2	8.0
1973	170	243	4900	7009	73575	105251	71339	102053	0.2	6.9
1974	120	156	4600	6012	107996	141152	98507	128749	0.1	4.7
1975	140	167	4800	5726	103389	123334	107592	128348	0.1	4.5
1976	110	124	5800	6583	129566	147063	114992	130521	0.0	5.0
1977	120	128	6700	7172	157560	168662	121212	129753	0.0	5.5
1978	120	120	6200	6200	183093	183093	143663	143663	0.0	4.3
1979	290	266	5600	5145	218927	201149	181802	167039	0.1	3.1
UPPER VOLTA										
1970	0	0	0	0	47	77	18	29	0.0	0.0
1971	0	0	0	0	50	78	16	25	0.0	0.0
1972	0	0	0	0	69	104	20	30	0.0	0.0
1973	0	0	0	0	99	141	25	35	0.0	0.0
1974	0	0	0	0	145	189	36	47	0.0	0.0
1975	5	5	0	0	151	180	44	52	3.3	0.0
1976	0	0	0	0	144	163	53	60	0.0	0.0
1977	0	0	0	0	209	223	55	58	0.0	0.0
1978	0	0	0	0	227	227	42	42	0.0	0.0
1979	10	9	0	0	301	276	NA	NA	3.3	NA
URUGUAY										
1970	5	8	0	0	231	382	233	385	2.1	0.0
1971	10	15	0	0	229	360	206	324	4.3	0.0
1972	0	0	0	0	212	320	214	323	0.0	0.0
1973	0	0	0	0	285	407	322	460	0.0	0.0
1974	0	0	0	0	487	636	382	499	0.0	0.0
1975	5	5	0	0	556	663	384	458	0.8	0.0
1976	5	5	0	0	588	667	546	619	0.8	0.0
1977	20	21	0	0	730	781	608	650	2.7	0.0
1978	0	0	0	0	774	774	688	688	0.0	0.0
1979	5	4	0	0	1206	1108	788	724	0.4	0.0
VENEZUELA										
1970	5	8	0	0	1849	3060	2599	4301	0.2	0.0
1971	20	31	0	0	2077	3270	3087	4861	0.9	0.0
1972	60	90	0	0	2434	3681	3126	4727	2.4	0.0
1973	90	128	0	0	2800	4005	4891	6996	3.2	0.0
1974	100	130	0	0	4141	5412	11071	14469	2.4	0.0
1975	90	107	0	0	6004	7162	8800	10497	1.4	0.0
1976	60	68	0	0	6800	7718	9299	10554	0.8	0.0
1977	100	107	0	0	10938	11708	9551	10224	0.9	0.0
1978	30	30	0	0	11785	11785	9187	9187	0.2	0.0
1979	120	110	0	0	11400	10474	14158	13008	1.0	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
VIETNAM										
1970	200	331	0	0	373	617	8	13	53.6	0.0
1971	310	468	0	0	594	935	8	12	52.2	0.0
1972	1200	1814	0	0	692	1046	13	19	173.4	0.0
1973	270	386	0	0	616	881	58	83	43.8	0.0
1974	150	196	0	0	NA	NA	NA	NA	NA	NA
1975	80	95	0	0	NA	NA	NA	NA	NA	NA
1976	40	45	0	0	NA	NA	NA	NA	NA	NA
1977	20	21	5	5	NA	NA	NA	NA	NA	NA
1978	90	90	0	0	900	900	300	300	10.0	0.0
1979	1100	1010	0	0	NA	NA	NA	NA	NA	NA
VIETNAM, SOUTH										
1970	925	1530	5	8	NA	NA	NA	NA	NA	NA
1971	800	1259	0	0	NA	NA	NA	NA	NA	NA
1972	1600	2419	0	0	NA	NA	NA	NA	NA	NA
1973	2700	3862	0	0	NA	NA	NA	NA	NA	NA
1974	825	1078	0	0	NA	NA	NA	NA	NA	NA
1975	850	1014	0	0	NA	NA	NA	NA	NA	NA
1976	...	...	...	...	...	...	...	...	...	...
1977	...	...	...	...	...	...	...	...	...	...
1978	...	...	...	...	...	...	...	...	...	...
1979	...	...	...	...	...	...	...	...	...	...
YEMEN (ADEN)										
1970	5	8	0	0	200	331	135	223	2.5	0.0
1971	5	7	0	0	157	247	96	151	3.1	0.0
1972	20	30	0	0	149	225	97	146	13.4	0.0
1973	40	57	0	0	171	244	100	143	23.3	0.0
1974	40	52	0	0	419	547	228	298	9.5	0.0
1975	40	47	0	0	323	385	172	205	12.3	0.0
1976	40	45	0	0	335	380	177	200	11.9	0.0
1977	120	128	0	0	544	582	181	193	22.0	0.0
1978	140	140	0	0	NA	NA	221	221	NA	0.0
1979	250	229	0	0	NA	NA	NA	NA	NA	NA
YEMEN (SANAA)										
1970	0	0	0	0	33	54	3	5	0.0	0.0
1971	0	0	0	0	34	53	4	6	0.0	0.0
1972	10	15	0	0	80	121	4	6	12.5	0.0
1973	5	7	0	0	123	176	8	11	4.0	0.0
1974	10	13	0	0	190	248	13	17	5.2	0.0
1975	20	23	0	0	294	350	11	13	6.8	0.0
1976	20	22	0	0	413	468	8	9	4.8	0.0
1977	30	32	0	0	1040	1113	11	11	2.8	0.0
1978	90	90	0	0	1283	1283	7	7	7.0	0.0
1979	450	413	0	0	1492	1370	14	12	30.1	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
YUGOSLAVIA										
1970	0	0	5	8	2874	4756	1679	2778	0.0	0.3
1971	30	47	0	0	3252	5120	1814	2856	0.9	0.0
1972	40	60	10	15	3233	4889	2237	3383	1.2	0.4
1973	80	114	30	42	4511	6453	2853	4081	1.8	1.1
1974	80	104	10	13	7542	9857	3805	4973	1.1	0.3
1975	140	167	90	107	7697	9181	4072	4857	1.8	2.2
1976	150	170	130	147	7366	8360	4878	5536	2.0	2.7
1977	110	117	190	203	9634	10312	5254	5624	1.1	3.6
1978	100	100	150	150	9988	9988	5671	5671	1.0	2.6
1979	120	110	130	119	12863	11818	6491	5963	0.9	2.0
ZAIRE										
1970	10	16	0	0	536	887	781	1292	1.8	0.0
1971	20	31	0	0	619	974	687	1081	3.2	0.0
1972	40	60	0	0	625	945	738	1116	6.4	0.0
1973	20	28	0	0	754	1078	1013	1449	2.6	0.0
1974	50	65	0	0	1051	1373	1381	1805	4.7	0.0
1975	30	35	0	0	905	1079	865	1031	3.3	0.0
1976	120	136	0	0	668	758	904	1026	17.9	0.0
1977	30	32	0	0	609	651	986	1057	4.9	0.0
1978	30	30	0	0	589	589	925	925	5.0	0.0
1979	30	27	0	0	597	548	1323	1215	5.0	0.0
ZAMBIA										
1970	5	8	0	0	559	925	1001	1656	0.8	0.0
1971	5	7	0	0	652	1026	679	1069	0.7	0.0
1972	20	30	0	0	677	1023	758	1146	2.9	0.0
1973	10	14	0	0	649	928	1147	1640	1.5	0.0
1974	10	13	0	0	968	1265	1407	1839	1.0	0.0
1975	20	23	0	0	1138	1357	810	966	1.7	0.0
1976	40	45	0	0	789	895	1036	1175	5.0	0.0
1977	20	21	0	0	798	854	893	955	2.5	0.0
1978	60	60	0	0	722	722	817	817	8.3	0.0
1979	20	18	0	0	904	830	1412	1297	2.2	0.0
ZIMBABWE										
1970	0	0	0	0	371	614	370	612	0.0	0.0
1971	0	0	0	0	447	703	404	636	0.0	0.0
1972	5	7	0	0	461	697	507	766	1.0	0.0
1973	5	7	0	0	597	854	692	989	0.8	0.0
1974	10	13	0	0	867	1133	884	1155	1.1	0.0
1975	5	5	0	0	884	1054	858	1023	0.5	0.0
1976	0	0	0	0	665	754	850	964	0.0	0.0
1977	10	10	0	0	669	716	814	871	1.4	0.0
1978	0	0	0	0	651	651	864	864	0.0	0.0
1979	20	18	0	0	912	837	1006	924	2.1	0.0

TABLE II. Value of Arms Transfers and Total Imports and Exports, 1970-1979, By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS Million dollars		ARMS EXPORTS Million dollars		TOTAL IMPORTS Million dollars		TOTAL EXPORTS Million dollars		ARMS IMPORTS / TOTAL IMPORTS	ARMS EXPORTS / TOTAL EXPORTS
	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	Current	Constant 1978	%	%
TAIWAN										
1970	300	496	0	0	1530	2532	1430	2366	19.6	0.0
1971	240	377	0	0	1850	2913	2000	3149	12.9	0.0
1972	40	60	0	0	2520	3811	2910	4400	1.5	0.0
1973	70	100	0	0	3800	5436	4380	6265	1.8	0.0
1974	150	196	0	0	6980	9122	5517	7210	2.1	0.0
1975	160	190	0	0	5960	7109	5301	6323	2.6	0.0
1976	160	181	10	11	7609	8636	8155	9256	2.1	0.1
1977	180	192	10	10	8522	9122	9349	10007	2.1	0.1
1978	200	200	0	0	11051	11051	12682	12682	1.8	0.0
1979	240	220	0	0	14800	13598	16100	14792	1.6	0.0

NA Not available. ... Pre-independence. O Nil or negligible

Note:

To avoid the appearance of excessive accuracy, arms transfer data have been independently rounded, with greater severity for larger numbers. World arms imports therefore do not equal world arms exports.

Region and organization totals also may not add due to rounding.

Total imports and exports are total trade figures as reported by individual countries. The extent to which arms are included may differ from country to country. World totals for imports and exports are not equal due to their divergent sources.

TABLE [illegible]. Value of Arms Transfers, Cumulative 1975-1979, By Major Supplier and Recipient Country

(Million Current Dollars)

SUPPLIER RECIPIENT	TOTAL	SOVIET UNION	UNITED STATES	FRANCE	UNITED KINGDOM	WEST GERMANY	CZECHO-SLOVAKIA	ITALY	POLAND	CHINA	CANADA	OTHERS
WORLD TOTAL	94,400	33,500	29,400	6,200	4,300	3,900	3,200	2,200	1,400	725	550	9,000
DEVELOPED*	20,800	5,900	7,000	625	825	825	2,400	100	950	10	300	1,800
DEVELOPING	73,600	27,700	22,400	5,600	3,500	3,100	825	2,100	470	700	250	7,000
NATO	11,300	-	6,900	625	625	1,200	-	330	-	-	280	1,300
WARSAW PACT	10,700	7,000	-	70	-	-	2,400	-	950	10	-	240
OPEC**	30,900	12,200	9,000	2,100	1,700	1,400	350	1,100	280	10	10	2,700
AFRICA	17,200	9,900	725	1,800	150	925	320	700	270	150	130	2,200
ALGERIA**	1,900	1,500	-	10	-	350	-	10	-	-	-	70
ANGOLA	850	500	-	5	10	10	10	-	20	-	-	290
BENIN	30	20	-	5	-	-	-	-	-	-	-	10
BOTSWANA	20	-	-	-	20	-	-	-	-	-	-	-
BURUNDI	20	10	-	5	-	5	-	-	-	-	-	5
CAMEROON	30	-	10	-	-	-	-	-	-	10	5	-
CAPE VERDE	50	50	-	-	-	-	-	-	-	-	-	-
CENTRAL AFRICAN REP.	5	-	-	-	-	-	-	-	-	-	-	5
CHAD	10	10	-	5	-	-	-	-	-	-	-	-
CONGO	60	50	-	-	-	-	-	-	-	10	-	-
EQUATORIAL GUINEA	10	10	-	-	-	-	-	-	-	-	-	-
ETHIOPIA	1,800	1,500	90	10	-	5	30	20	10	5	-	160
GABON**	60	-	-	30	-	-	-	10	-	10	-	10
GAMBIA	5	-	-	-	-	-	-	-	-	5	-	-
GHANA	130	-	-	-	5	50	-	20	-	-	-	60
GUINEA-BISSAU	30	30	-	-	-	-	-	-	-	-	-	-
GUINEA	60	60	-	-	-	-	-	-	-	-	-	-
IVORY COAST	160	-	-	100	-	-	-	-	-	-	-	50
KENYA	120	-	50	10	10	5	-	5	-	-	30	5
LESOTHO	-	-	-	-	-	-	-	-	-	-	-	-
LIBERIA	5	-	5	-	-	-	-	-	-	-	-	-
LIBYA**	6,900	5,000	-	310	10	160	270	450	250	-	-	460
MADAGASCAR	50	30	-	10	-	-	-	-	-	-	-	10
MALAWI	20	-	-	10	-	5	-	-	-	-	-	-
MALI	120	110	-	-	-	5	-	-	-	5	-	-
MAURITANIA	90	-	-	40	5	-	-	-	-	-	-	50
MAURITIUS	-	-	-	-	-	-	-	-	-	-	-	-
MOROCCO	1,400	20	310	725	5	50	5	50	-	-	-	250
MOZAMBIQUE	240	170	-	-	-	-	5	-	-	5	-	60
NIGER	40	-	-	30	-	10	-	-	-	-	-	-
NIGERIA**	300	150	30	40	50	10	-	-	-	-	-	10
RWANDA	20	-	-	-	-	-	-	-	-	-	-	20
SAO TOME & PRINCIPE	-	-	-	-	-	-	-	-	-	-	-	-
SENEGAL	50	-	-	10	-	-	-	-	-	-	10	30
SIERRA LEONE	-	-	-	-	-	-	-	-	-	-	-	-
SOMALIA	440	210	-	20	5	10	-	30	-	5	-	170
SOUTH AFRICA*	525	-	20	310	-	-	-	50	-	-	5	150
SUDAN	400	10	120	-	-	230	-	-	-	5	20	30
SWAZILAND	-	-	-	-	-	-	-	-	-	-	-	-
TANZANIA	440	300	-	-	5	-	-	10	-	30	20	70
TOGO	50	-	-	20	-	5	-	-	-	-	10	20
TUNISIA	170	-	50	10	5	10	-	30	-	10	-	50
UGANDA	120	110	-	-	-	-	5	-	-	-	-	5
UPPER VOLTA	20	-	-	5	5	10	-	-	-	-	-	5
ZAIRE	250	-	30	120	-	5	-	10	-	30	20	40
ZAMBIA	150	50	-	-	20	5	-	10	-	30	20	20
ZIMBABWE	40	-	-	-	-	-	-	-	-	-	-	40

TABLE III. Value of Arms Transfers, Cumulative 1975-1979, By Major Supplier and Recipient Country — continued

(Million Current Dollars)

SUPPLIER RECIPIENT	TOTAL	SOVIET UNION	UNITED STATES	FRANCE	UNITED KINGDOM	WEST GERMANY	CZECHO-SLOVAKIA	ITALY	POLAND	CHINA	CANADA	OTHERS
EAST ASIA	9,500	2,000	5,400	120	440	140	-	90	10	240	50	1,000
BURMA	50	-	10	5	-	20	-	5	-	-	-	10
CHINA	625	210	-	50	350	-	-	-	-	-	10	10
INDONESIA**	440	-	120	20	-	10	-	-	-	-	-	280
JAPAN*	750	-	725	-	20	-	-	-	-	-	-	-
KAMPUCHEA	380	20	300	-	-	-	-	-	-	60	-	-
KOREA, NORTH	575	280	-	-	-	10	-	-	10	170	-	110
KOREA, SOUTH	1,900	-	1,700	10	5	80	-	50	-	-	40	40
LAOS	120	100	10	-	-	-	-	-	-	-	-	-
MALAYSIA	420	-	180	10	30	-	-	-	-	-	-	200
MONGOLIA	120	120	-	-	-	-	-	-	-	-	-	-
PHILIPPINES	250	-	190	5	20	10	-	5	-	-	-	30
SINGAPORE	270	-	150	10	10	-	-	-	-	-	-	90
THAILAND	430	-	320	-	5	-	-	30	-	-	10	60
VIETNAM	1,300	1,300	-	-	-	-	-	-	-	10	-	10
VIETNAM, SOUTH	850	-	850	-	-	-	-	-	-	-	-	-
TAIWAN	1,000	-	900	-	-	-	-	5	-	-	-	150
EUROPE	12,200	575	7,300	825	430	1,100	-	360	5	10	100	1,600
NATO EUROPE	9,400	-	6,100+	625	390	975	-	330	-	-	30	1,000
BELGIUM*	625	-	.70	40	120	140	-	-	-	-	5	40
DENMARK*	270	-	90	-	20	110	-	10	-	-	-	40
FRANCE*	290	-	150	-	100	20	-	-	-	-	-	20
GERMANY, WEST*	2,200	-	1,600	140	10	-	-	10	-	-	10	460
GREECE	2,000	-	1,200	390	20	230	-	60	-	-	10	80
ICELAND*	-	-	-	-	-	-	-	-	-	-	-	-
ITALY*	625	-	550	-	-	10	-	-	-	-	-	60
LUXEMBOURG*	10	-	10	-	-	-	-	-	-	-	-	-
NETHERLANDS*	700	-	370	-	120	80	-	10	-	-	10	100
NORWAY*	260	-	160	-	-	20	-	-	-	-	-	90
PORTUGAL*	170	-	40	5	-	70	-	-	-	-	-	60
TURKEY	1,100	-	550	-	-	290	-	240	-	-	-	30
UNITED KINGDOM*	925	-	825	30	-	-	-	-	-	-	-	60
WARSAW PACT	10,700	7,000	-	70	-	-	2,400	-	950	10	-	240
BULGARIA	1,200	1,200	-	-	-	-	20	-	10	-	-	-
CZECHOSLOVAKIA*	1,300	1,200	-	-	-	-	-	-	-	-	-	50
GERMANY, EAST*	2,000	1,700	-	-	-	-	230	-	70	-	-	5
HUNGARY*	1,000	975	-	-	-	-	50	-	10	-	-	-
POLAND*	1,500	1,200	-	-	-	-	210	-	-	-	-	10
ROMANIA*	875	675	-	70	-	-	30	-	70	10	-	20
SOVIET UNION*	2,800	-	-	-	-	-	1,900	-	800	-	-	150
OTHER EUROPEAN	2,800	575	1,200	210	30	90	-	30	5	10	60	575
ALBANIA	10	-	-	-	-	-	-	-	-	10	-	-
AUSTRIA*	200	-	40	5	-	-	-	-	-	-	20	140
FINLAND*	110	50	10	-	-	-	-	-	-	-	-	50
IRELAND*	5	-	-	-	-	-	-	-	-	-	-	-
MALTA	5	-	-	-	-	-	-	-	-	-	-	5
SPAIN	1,000	-	550	170	-	90	-	20	-	-	10	180
SWEDEN*	240	-	140	5	10	-	-	-	-	-	-	90
SWITZERLAND*	575	-	460	-	10	-	-	-	-	-	10	100
YUGOSLAVIA	625	525	10	20	10	-	-	10	5	-	20	30

TABLE III. Value of Arms Transfers, Cumulative 1975-1979, By Major Supplier and Recipient Country — continued

(Million Current Dollars)

SUPPLIER RECIPIENT	TOTAL	SOVIET UNION	UNITED STATES	FRANCE	UNITED KINGDOM	WEST GERMANY	CZECHO-SLOVAKIA	ITALY	POLAND	CHINA	CANADA	OTHERS
LATIN AMERICA	5,500	1,500	725	775	675	440	-	350	-	-	20	1,000
ARGENTINA	975	-	90	270	60	110	-	80	-	-	-	360
BARBADOS	-	-	-	-	-	-	-	-	-	-	-	-
BOLIVIA	110	-	10	5	-	5	-	-	-	-	-	90
BRAZIL	725	-	160	50	400	20	-	80	-	-	-	30
CHILE	380	-	110	5	40	30	-	-	-	-	-	190
COLOMBIA	70	-	20	-	-	40	-	-	-	-	-	10
COSTA RICA	-	-	-	-	-	-	-	-	-	-	-	-
CUBA	875	875	-	-	-	-	-	-	-	-	-	-
DOMINICAN REPUBLIC	5	-	5	-	-	-	-	-	-	-	-	-
EL SALVADOR	30	-	5	30	-	-	-	-	-	-	-	5
ECUADOR**	575	-	40	280	70	110	-	5	-	-	10	60
GUATEMALA	50	-	20	10	-	-	-	-	-	-	-	30
GUYANA	10	-	-	-	5	-	-	-	-	-	-	-
HAITI	-	-	-	-	-	-	-	-	-	-	-	-
HONDURAS	50	-	10	-	-	-	-	-	-	-	-	40
JAMAICA	-	-	-	-	-	-	-	-	-	-	-	-
MEXICO	70	-	10	10	40	-	-	-	-	-	-	10
NICARAGUA	30	-	5	-	-	-	-	-	-	-	-	20
PANAMA	10	-	10	-	-	-	-	-	-	-	-	-
PARAGUAY	20	-	5	-	-	-	-	-	-	-	-	20
PERU	1,100	650	100	110	10	40	-	80	-	-	-	100
SURINAM	-	-	-	-	-	-	-	-	-	-	-	-
TRINIDAD & TOBAGO	-	-	-	-	-	-	-	-	-	-	-	-
URUGUAY	40	-	10	-	-	-	-	-	-	-	-	30
VENEZUELA**	410	-	110	10	60	80	-	110	-	-	-	20
MIDDLE EAST	32,900	10,300	13,700	2,200	2,100	925	420	650	140	70	10	2,400
BAHRAIN	20	-	-	10	-	-	-	-	-	-	-	5
CYPRUS	10	-	-	-	-	-	-	-	-	-	-	10
EGYPT	1,500	250	250	490	110	180	20	60	-	60	-	80
IRAN**	8,700	650	6,600	200	310	430	-	340	-	-	-	240
IRAQ**	6,800	4,900	-	410	20	160	80	70	30	10	-	1,100
ISRAEL	4,200	-	4,200	10	60	-	-	30	-	-	-	-
JORDAN	600	-	500	-	20	5	-	-	-	-	5	60
KUWAIT**	800	50	350	150	210	20	-	-	-	-	-	10
LEBENON	60	-	30	5	20	5	-	-	-	-	-	10
OMAN	370	-	10	-	330	-	-	-	-	-	-	30
QATAR**	70	-	5	50	10	-	-	-	-	-	-	10
SAUDI ARABIA**	3,600	-	1,800	290	900	20	-	130	-	-	-	450
SYRIA	4,500	3,600	-	190	30	100	310	-	10	-	-	260
UNITED ARAB EMIRATES**	410	-	10	350	30	-	-	20	-	-	-	10
YEMEN (ADEN)	600	575	-	-	-	-	-	-	-	-	-	5
YEMEN (SANAA)	625	210	110	80	-	5	-	5	100	-	-	110
NORTH AMERICA	1,800	-	825	5	240	260	-	5	-	-	250	240
CANADA*	1,000	-	825	-	10	180	-	-	-	-	-	10
UNITED STATES*	775	-	-	5	230	70	-	5	-	-	250	230

TABLE III. Value of Arms Transfers, Cumulative 1975-1979, By Major Supplier and Recipient Country — continued

(Million Current Dollars)

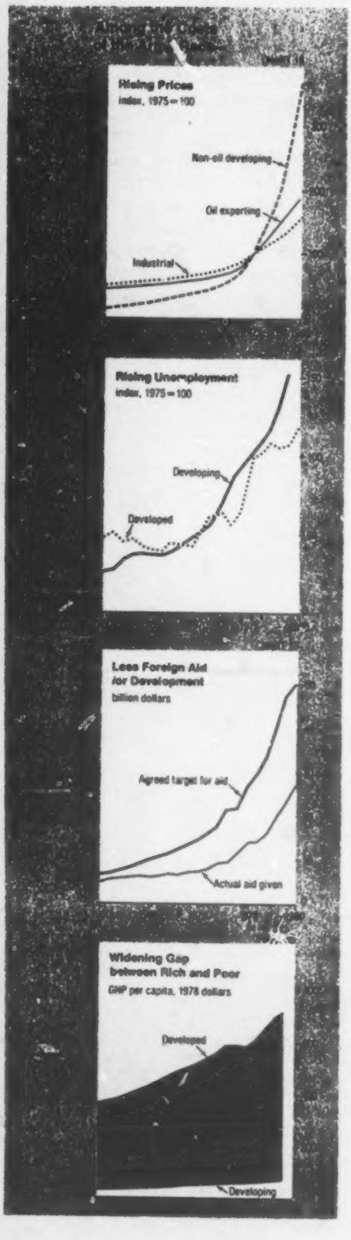
SUPPLIER RECIPIENT	TOTAL	SOVIET UNION	UNITED STATES	FRANCE	UNITED KINGDOM	WEST GERMANY	CZECHO-SLOVAKIA	ITALY	POLAND	CHINA	CANADA	OTHERS
OCEANIA	900	-	450	-	150	130	-	-	-	-	-	170
AUSTRALIA*	675	-	420	-	130	130	-	-	-	-	-	10
FIJI	10	-	-	-	-	-	-	-	-	-	-	10
NEW ZEALAND*	50	-	30	-	20	-	-	-	-	-	-	-
PAPUA NEW GUINEA	150	-	-	-	-	-	-	-	-	-	-	150
SOUTH ASIA	3,600	2,300	220	360	130	10	70	20	40	250	-	170
AFGHANISTAN	470	450	-	-	-	-	10	-	-	-	-	5
BANGLADESH	60	20	-	10	-	-	-	-	-	10	-	20
INDIA	2,200	1,800	40	40	100	10	50	20	40	-	-	50
NEPAL	5	-	-	5	-	-	-	-	-	-	-	-
PAKISTAN	875	20	180	320	20	-	5	-	-	240	-	110
SRI LANKA	20	10	-	-	10	-	-	-	-	-	-	-

– None or negligible. * Developed country. ** OPEC country.

+ Includes transfers to NATO agencies as such and not attributed to any country.

Note:

To avoid the appearance of excessive accuracy, all numbers in this table are independently rounded, with greater severity for larger numbers. Therefore, components may not add to totals.



Economic—Social Decline

In striking contrast to the robust expansion of military force is the pervasive malaise of the world economy. The signs of depression are evident in all the basic measures of economic performance. Inflation and unemployment, which impinge most directly on the public welfare, increased at a faster pace in 1980 and, according to preliminary indications, into the first half of 1981 as well. Accompanying these trends was a marked slowing down of growth in world GNP and in world trade. The poorest countries, with few exceptions, were unable to achieve any improvement in abysmally low income levels.

Reviews of the world's current recession and structural rigidities are, on the whole, still remarkably free of inquiry into the connections between these problems and the world's intense arms race. Economic development is a matter of widespread concern in both national and international bodies. The military balance appears to rank as the principal subject of interest at the highest levels of national government. But where in these highest circles is the overall military-social balance subject to searching scrutiny? Who weighs military requirements against the realities of human needs, and gives a careful public accounting of the balance?

So far the answer seems to be that the world lives two lives: one has to deal with national security, which must be protected at all costs; the other is people's security and it must of necessity stand lower in the scale of priority. Analyzing the relationships between them, or the values of one against the other, is therefore not seen as an official obligation.

This section takes a look at society's concerns in the broader sense, both current and longer-range problems, and at some of the interrelationships between the two forms of security.

Inflation

Inflation is a severe and particularly cruel economic problem. It tends to bear most heavily on the poor and the elderly of all nations, those who live at the margin. Inflation for them means less of those needs that are basic to life itself.

Like a plague out of control, inflation has in recent years become a global illness. The world-wide average of consumer prices has gone up 15 percent in the past year. During the second quarter of 1981 prices were over 70 percent higher than in 1975. The most rapid rise has occurred in the developing countries which are not oil-exporting. Their prices have more than quadrupled since 1975 (*chart 15*).

In the complex of factors kindling inflation, the military element is usually overlooked. Yet in a number of ways it contributes significantly to pressures on prices. Excessive military spending has the general effect of overheating the civilian economy. It generates more spendable income than goods and services to absorb it.

Military expenditures also create a distinct government-dependent sector which in itself has inflation-prone characteristics: rapid obsolescence and product change, unstable markets, the excessive waste characteristic of large bureaucracies beyond public control, cost-plus pricing, and with it, reduced pressures for management efficiency. Where supply bottlenecks and shortages of skilled workers exist, military contractors are able to out-bid civilian buyers, driving prices to higher levels throughout the market.

The restraints on normal exchanges between nations, which go with an intense military competition, are also inflationary. The free flow of foreign trade and technology, which could stimulate growth and help to curb inflation, is hindered by strategic controls. The trade in arms, on the other hand, is promoted with government assistance—and through it, inflation is also promoted. The major portion of this trade goes from developed to developing countries, where it inevitably puts pressure on the prices they charge for oil and the raw materials which the developed countries buy.

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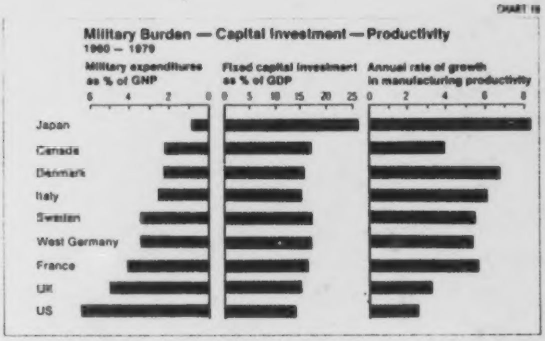
CHART 19



Productivity

The improvement in productivity of labor and capital has a significant effect on our lives. Investment which ensures the application of new technology and innovations, skill training, and an increase in employment, is the vehicle for promoting productivity. To the average person, the gains in efficiency can mean lower prices and a gradual rise in living standards.

In recent years, however, the improvement in productivity per capita has deteriorated or stopped. Industrialized countries have recorded a general slowdown over the past eight years. In 1980 four major industrialized countries (US, Canada, West Germany, and UK) registered a drop in output per man hour.

Among ten developed countries for which historical data are available, the slowest growth in investment and manufacturing productivity has occurred in two countries (UK and US) where military expenditures are the highest in relation to GNP. The best investment and productivity record is in Japan, where the military-to-GNP ratio has been very low and productivity has grown at an amazing 8 percent per year (*chart 19*).

The poorest record may well be in the Soviet Union, where the proportion of GNP devoted to military programs is higher than in the NATO countries, perhaps twice as high. If CIA observations are correct, the productivity rate turned from a plus in the 1960's to a minus in the 1970's, i.e. output per man actually declined. The productivity drop is described as the Soviets' biggest economic headache.

The reasons for this evident link between a high military effort and relatively poor productivity performance are not hard to find. An arms race that drains investment and research resources not only contributes to inflationary trends, but also limits the potential for growth and innovation. On the civilian side, this means an economy less prepared to compete in world markets, less able to provide its citizens with improved conditions of living.

Unemployment

The continuing rise in unemployment is already a global disaster. Personal tragedies into the millions, the contagious sense of alienation and loss of purpose, the effects of rising crime rates, the breakdown of security within the nation, none of these can be adequately measured statistically.

The bare numbers are bad enough, however. In Western Europe alone it is estimated that 12-14 million people are out of work, 7 percent of the labor force; in North America, over 8 million do not have jobs. Youth unemployment is considerably higher in all countries surveyed. Estimates of joblessness in the developing world are necessarily rough, but at last count ILO put the total of unemployed and underemployed

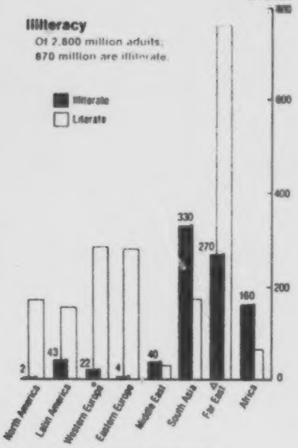
"It is no use to have the greatest and best army in the world if the people are dying from hunger."

José Napoleón Duarte,
President of El Salvador, 1981

CHART 20

Illiteracy

Of 2,800 million adults, 870 million are illiterate.

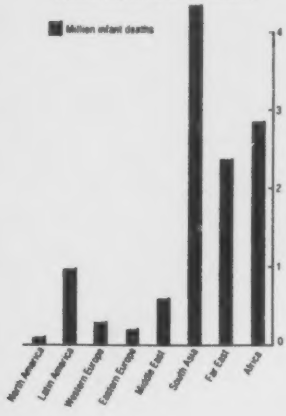


* Includes NATO Europe and Other Europe
▼ Includes Oceania

CHART 21

Infant Mortality

Of 120 million babies born in the year, 12 million die before the first birthday.



at 455 million, not counting China and other centrally-planned countries in Asia. A sample of 50 countries for which records are available since 1960 indicates that the relative increase in unemployment continues to be considerably worse in the developing than in the developed countries (*chart 16*).

Military expenditures of course do produce jobs but, as official US studies show, they do not yield as many jobs as the same amount of money spent by government for civilian purposes. Dollar for dollar, more employment is created through such public endeavors as construction, transit systems, health services, and schools. The latter also create more job skills that are transferable and useful in the expansion of the economy, an advantage of special importance to developing countries. It is this relationship of military expenditures to the potential development of human resources that must be looked at most closely.

Basic needs

While governments grapple with the needs of military forces for sophisticated, redundant weaponry, one-third of the world's people lack basic necessities of life, 800 million live in dire poverty. No evidence more directly and starkly measures the impact of military expenditures on the social condition than the fact that the $550 billion now spent in one year for arms and armies equals the entire income of 2 billion people living in the poorest countries. This is the bottom line in the world's military-social balance.

As political attention and precious resources have been focussed on military priorities, the poor and deprived of the world have steadily grown in numbers. They are in all regions, but most by far are concentrated in the developing countries of Asia, Africa, and Latin America (*charts 20 and 21*). These countries have over three-fourths of the world's population. By the year 2000 they will have 90 percent of the total. Developing countries represent a substantial, perhaps the major, share of the world's critical natural resources. For the most part, however, they are severely underdeveloped in resource use, and especially in the most basic of all resources—people.

In 1979, when GNP per capita of developed countries averaged $7,900, the average was $740 in developing countries. In absolute terms, the gain since 1960 has been over ten times more for developed countries, $3,600 in constant dollars, as against $340 for developing. The huge and steadily widening gap between the two groups is illustrated in *chart 18*.

The disparity is all the greater when per capita national incomes are distributed on a curve from rich to poor, and smaller segments of the world population are considered (see table opposite). It is further amplified by the wide spread between the income elite and the poorest elements *within* nations. The statistical evidence available suggests that the gap between rich and poor tends to be widest in areas where the average income is smallest.

Income contrasts are a shocking reminder of how far the global economy must still advance before there is adequate product for all, but they are pallid, impersonal expressions of the vast store of unmet needs in much of the world. How can statistics possibly define the crushing poverty in which millions of people live.

The numbers stand in long rows, like tombstones, silent monuments to lives lost:

. . . **870,000,000 adults who cannot read and write**
. . . **500,000,000 people who have no jobs or are less than fully employed**
. . . **130,000,000 children who are unable to attend primary school**
. . . **450,000,000 people who suffer from hunger or malnutrition**
. . . **12,000,000 babies who die every year before their first birthday**
. . . **42,000,000 people who are blind or nearly so**
. . . **2,000,000,000 people who do not have safe water to drink**
. . . **250,000,000 people who live in urban slums or shantytowns**

The level of income per capita is about 50 times higher among nations representing the richest fifth of the world's population than in the poorest nations.

This means that the richest can spend through their governments 100 times more for education, 150 times more for health. They have ten times as many physicians to care for them; three times as many teachers for their children. Almost all of them can read. They have the luxury of clean water, and more food to eat than they need.

The richest fifth live a very different life from the poor and, on the average, have 22 more years in which to enjoy [illegible]

The Development Gap 1978

	Richest fifth of the world's	Poorest fifth of the population
GNP per cap ($)	7,716	186
Govt. education exp. per cap ($)	426	4
Teachers per 1,000 children	36	12
Adult literacy (%)	97	37
Govt. health exp. per cap ($)	327	2
Physicians per 10,000 people	20	2
Life expectancy (years)	72	50
Infant deaths per 100 births	2	14
Calories per cap as % of requirements	131	88
Population with safe water (%)	95	31

The numbers are overwhelming, but there are other aspects of social neglect which hide behind them. The human resources that are undeveloped represent a loss to society as a whole. Lives that are weakened by deprivation cannot make a normal contribution to their community. They are a drag on the productive efforts of others. They do not provide marketing opportunities for the world's commerce. Rather than contributing to development, they drain it.

When people have needs unfulfilled that are so basic to life itself, the social structures in which they live are less stable. In growing numbers they move to cities in hope of work, or they become refugees seeking to migrate to other countries. Cities in the developing world are doubling in size every 10 to 15 years, the populations of their slums and shantytowns twice as fast. Unequipped to meet even minimal needs for health, sanitation, housing, or education, unable to provide jobs, cities become centers of social tension and violence.

"Injustice reigns when some nations accumulate riches and live in abundance while other nations cannot offer the majority of people the basic necessities. Injustice reigns when within the same society some groups hold most of the wealth and power while large strata of the population cannot decently provide for the livelihood of their families."
Pope John Paul II, 1981

In a broader sense, poverty on the present scale constitutes a threat to all societies. When there is nothing to lose, violence seems to be a way out. The militarization which has contributed to it then gains a justification for repression and further growth.

On the other hand, development which more adequately brings growth—and hope—to all parts of the global community has a healthy multiplier effect. The child who is educated, the handicapped person who is trained, the farmer who has a few acres to till, become sources of wealth themselves. Instead of dependents of society, they are contributors, enhancing general productivity and well-being.

* * * *

The extremes of militarization have left a weakened global community, one less able to cope wth its basic problems, more susceptible to violent solutions. The political leadership, created of the people, by the people, to serve the people, has veered from its essential purpose. In an obsession with military power, it has seemed to lose touch with its humanity.

Can a spirit of humane, cooperative endeavor, so essential in today's tightly-knit world, be born out of the overly-armed, hostile camps of 1981? It is from the public as well as those in charge that the answer must come.

ARMS TRANSFERS AND THE THIRD WORLD[*]

Intellectual fashions in the American academic community have a normal gestation period and life cycle of approximately five to ten years. Certain mindsets and convictions have an enduring longevity, however. Among these is the ill-founded notion that the United States is unsurpassed as a purveyor of military equipment to so-called Third World nations. Data is constantly amassed to support this supposition, as well as to undergird other, supplementary contentions—to wit, the American arms export program is a catalyst for Third World arms races, that arms transfers always and everywhere generate conflict situations, and, of even more dubious validity, the United States today has embarked on a policy of unrestrained arms sales.

The roots of these beliefs and contentions can be traced, in part at least, to a prevailing skepticism about the utility of arms and military force in the contemporary world. War is viewed by most scholars as a "costly, inhumane and unreliable way of pursuing political ends." Many Third World leaders share this view but would not agree that armed forces have little utility. Virtually every state participating in the United Nations—more than 150 members—maintains a military establishment, for reasons ranging from prestige and symbolism to a perceived need to deter aggressive neighbors from launching untoward military actions, or the actual use of force. From their perspective, uselessness has not been established; nor is there any reason based on past human conduct for them to believe that all disagreements can be resolved through peaceful means. While the size of forces maintained the missions and roles assigned them, and the weapons inventories they have accumulated vary from country-to-country, most Third World leaders appear to agree on the necessity for at least a modicum of military capability to maintain balances of local or regional power.

We have also learned over the past decade that, in the Third World, no technologically pre-determined plateau exists where conventional arms acquisitions are concerned. The scale and sophistication of weapons acquired (if not entirely absorbed) in local military establishments have been growing. Because of the drama associated with such acquisitions, scholars and other observers have frequently failed to notice other significant developments in Third World arms programs. Among the more salient have been the following:

- The growth in the number of Third World countries engaged in the assembly, production and sale of military equipment, spurred by agreements with major arms suppliers.[**]
- The mounting importance to the Soviet Union of arms transfers of sophisticated weapons systems, not only as a critical instrument of foreign policy, but as an earner of hard currencies (in the capitalist sense). This, in turn, has stimulated Third World requests to the United States to match Moscow in the sale of sophisticated arms.
- The balanced approach developed by the United States in its recent arms transfer decisions, which has taken into account such considerations as local tensions and rivalries, the economic opportunity costs associated with acquisition of sophisticated equipment, training and absorptive factors, and the political implications arising from a decision to make military equipment available.

General Overview

During the period 1977 through 1980, the United States pursued a policy of unilateral restraint in its transfer of conventional weapons abroad. Under the policy announced by President Carter in May 1977, arms transfers were to be viewed as an "exceptional foreign policy instrument," one whose use was to be carefully and rigorously constrained. New bureaucratic controls were subsequently placed on United States arms transfers to all countries other than NATO, Australia, Japan, and New Zealand. These included a number of qualitative prohibitions, as well as an annual ceiling on the dollar value of new commitments of weapons and weapons-related items under United States Foreign Military Sales (FMS) and the grant Military Assitance Program (MAP).

The application of these unilateral constraints was accompanied by efforts on the part of the Carter Administration to obtain the cooperation of the Soviet Union and Western European countries to reduce the level of the international arms trade. These efforts, for a wide variety of reasons, registered few results and were ultimately abandoned by that Administration. Of particular interest, the United States and the Soviet Union conducted four rounds of talks on Conventional Arms Transfers (CAT), between December 1977 and December 1978, devoted to establishing regions to encompass in a regime of restraint. With the invasion of Afghanistan by Soviet forces in December 1979, the Carter Administration perceived little advantage in pursuing these talks.

In practical terms, there is nothing in the recent experience of the United States to suggest that a unilateral policy of arms export restraint would be viewed by the Soviet Union or most other arms producing nations as a model to be followed. Available evidence indicates that they would regard a self-denying ordinance on the part of the United States as a unique opportunity to enter new markets, acquire new customers, and to expand their political influence. At the same time, a number of small nations were carving out a role for themselves as international military equipment suppliers, altering the character and potential balance of the international market in arms. India, Israel, South Africa, Argentina and Brazil emerged as exporters. These countries, *inter alia*, counted for $1.58 billion[*] in military sales during 1980 alone. (In-

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[*] By Dr. William H. Lewis, Director, Security Policy Studies, George Washington University

[**] Some Third World countries insist upon agreements as a condition of their purchase of major weapons, partly as an offset to the cost of purchase, and to build the base of their domestic industries.

[*] "Third World Arms Production" *WMEAT 1969-1978.*

Reproduced from U.S. Arms Control and Disarmament Agency. World military expenditures and arms transfers, 1970–1979. Washington, 1982. p. 27–33.

terestingly, Sweden, Czechoslovakia, Belgium, Spain, Poland, and Austria, among others, concluded $200-$500 million in arms agreements in 1980.) The United States Arms Control and Disarmament Agency has reported that thirty countries now manufacture arms, and the number of developing countries capable of building or assembling military equipment (other than small arms) has risen from six to 14*.

Despite these impressive figures, few if any Third World nations can hope to escape some measure of dependence on Western producers, or on the Soviet Union, for advanced weaponry and other items of advanced military equipment. Cognizant of this, and anxious to take advantage of the regime of restraint imposed by President Carter in 1977, the Soviet Union and Western European nations increased their sales to Third World regions.**

Frequently ignored by many scholars and other specialists on the subject is the fact that the United States is no longer the principal supplier of military equipment to Third World countries. The Soviet Union has achieved preeminence in this field as the following table attests.***

Weapons and Weapons-Related Sales Agreements to the Third World, 1977-1980
(in US $ millions)

Supplier	1977	1978	1979	1980	1977-80 Average
Soviet Union	9,585	2,916	8,825	14,812	9,035
Other Communist	885	924	1,382	1,287	1,120
United States*	6,996	7,263	5,621	6,642	6,631
Western Europe**	6,955	9,336	6,766	12,679	8,934
Other Free World	1,215	1,281	1,958	3,549	2,001
Total	25,636	21,720	24,552	38,969	27,744

*The United States figure does not include military construction and other non-lethal defense services.

**The major suppliers: France, the United Kingdom, West Germany, and Italy.

In the Third World, the value of total arms sales increased by roughly 52 percent, from an estimated $25.6 billion in 1977 to $39.0 billion in 1980. During the same period, Soviet sales of weapons and weapons-related items to the Third World rose by approximately 55 percent, as indicated in the above table. During the same period, the value of United States arms transfer agreements with the Third World remained relatively constant, decreasing by about five percent during the period under review. When agreements by Western European arms producers (France, the United Kingdom, Italy, and West Germany) are aggregated, they actually surpassed the United States. The West European producers registered spectacular gains in the value of their arms transfer agreements with Third World countries, increasing their totals by 82 percent over the four-year period for which the most complete data are available. When all data are aggregated, the United States accounted for less than one-fourth of all arms sales:

Arms Sales Agreements to the Third World
(in US $ millions)

	1977-1980
Soviet Union	36,138
United States	26,522
France	17,775
United Kingdom	7,084
Italy	5,570
West Germany	5,307
Other Free World	8,003
Other Communist	4,478
Total	110,97[illegible]

Even when arms suppliers are compared in terms of actual deliveries (rather than sales agreements) to Third World countries during the 1977-1980 time-frame, the position of the Soviet Union, the United States, and Western European suppliers in overall rank orderings does not change appreciably—the United States portion of the whole remained fairly constant.* Nevertheless, American academic specialists and lay observers remain convinced that the United States is in the forefront of military suppliers to the Third World. Their conviction is predicated on incomplete or faulty data in some instances; in other cases, contradictory evidence is ignored or ruled out of court with a fervor

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*Ibid. According to data released by the United States Arms Control and Disarmament Agency, the value of arms produced in the Third World, excluding the People's Republic of China, rose from less than $1 billion in 1970 to more than $5 billion in 1979.

**For purposes of this article, the designation "Third World" includes all countries except NATO, the Warsaw Pact, other European countries, Australia, Japan, and New Zealand.

***Data for the United States are by fiscal year; all others are by calendar year.

*The following data underpins the author's contention:

Arms Deliveries to the Third World
(in US $ millions)

	1977-1980
Soviet Union	27,529
United States	17,260
France	6,805
United Kingdom	3,353
West Germany	2,861
Italy	1,971
Other Free World	4,891
Other Communist	3,738
Total	69,508

Weapons Delivered to the Third World, 1977-80

Weapons Category	Soviet Union	United States	Major West European
Tanks and self-propelled guns	6,022	3,036	795
Artillery	10,523	2,270	2,068
APCs and Armored Cars	7,642	7,167	2,615
Major Surface Combatants	25	22	34
Minor Surface Combatants	107	24	367
Submarines	5	3	12
Guided Missile Boats	43	0	17
Supersonic Combat Aircraft	1,761	510	251
Helicopters	676	187	916
Other Aircraft	247	273	407
Surface-to-Air Missiles (SAMs)	13,654	5,620	2,049

that should generate doubt about the objectivity with which the subject is addressed.

Data: A Window of Vulnerability

The Executive Branch of the US Government provides a welter of reports and relevant data to Congressional committees, both annually and on a quarterly basis. Indeed, the United States is unrivalled in the amount of detailed information it makes available. Other governments tend to view arms supply information as sensitive and therefore jealously guard such data. The result, not infrequently, is a general overweighting of information which distorts public perceptions of the type, quantity, and political implications of military equipment flowing to the Third World.

Even within the American intelligence community, severe difficulties are encountered in estimating and comparing the value of the arms transfer programs of various supplier countries because of widely divergent approaches to data compilation, reporting standards and structural differences in the composition of individual countries' military transfer programs. As already indicated, the United States publishes precise information on the quantity of its exports of weapons, support equipment, spare parts, and technical services, all of which are priced individually. The degree of completeness of information on non-US Free World arms transfers, although not as complete as data on the United States, is reasonably accurate. By comparison, the Soviet Union does not release information on its transfers, treating the latter as a transaction demanding confidentiality. As a result, all observers are compelled to rely on a combination of fragmentary empirical evidence, past experience, intuitions and extrapolations.

Even when attempting to establish a standard measure for pricing, major obstacles exist. The use of current export prices to estimate the dollar value of Soviet arms sales can be misleading, since the Soviet Union does not always make its military products available at competitive world market prices. This is particularly true with respect to used or refurbished weapons systems. As a result, Soviet sales agreements are often underestimated by unwary observers and specialists.

Aside from the continued designation of the United States as the Darth Vader of arms sales, the impulse to abuse and misuse existing data by observers in a position to maintain high professional standards is disturbing. For example, a fact often ignored is that approximately 40 percent of all American military exports abroad is in the non-weapons category—including $2.4 billion in military construction projects in fiscal year 1980 to Saudi Arabia; by comparison, the Soviet Union supplied in excess of 85 percent in weapons systems. This is reflected in the quantity of weapons recently provided to "developing" or Third World countries, as the table above demonstrates.

Part of the difficulty encountered by impartial observers in comparing arms exports is definitional. In recent years, some confusion has arisen over the several arms transfer categories in use by the US Government and other major suppliers. For purposes of definition, a "major supplier," according to official definition, is a nation that follows a vigorous arms export policy, produces a wide range of advanced weapon systems, and whose arms agreements have exceeded $1 billion in value annually over the past several years. Only six nations fall into this category (the Soviet Union, the United States, France, the United Kingdom, West Germany, and Italy). A second common misconception relates to the term "arms transfer." More than "arms" are included in reports by our government on United States transactions—to wit:

> " 'Arms' includes new, used or refurbished conventional lethal weapons (including those capable of delivering both conventional and chemical/nuclear munitions) and non-lethal military support equipment such as radar or military uniforms and accoutrements. Also included are military training, arms production or assembly facilities, and military base or fortification construction."

As has already been observed, it is mischievous in the extreme to allege as some do that all such "arms" deliveries involve lethal weapons. Total United States sales in 1980 were $16 billion, of which no more than $8.5 billion were in weapons systems.

Close scrutiny and careful analysis would also lead to the conclusion that United States arms deliveries to Third World areas has been highly selective and carefully controlled. With respect to advanced weaponry:

Numbers of US Weapons Systems Delivered in 1980

	Advanced Aircraft	Tanks	Artillery	Fighting Ships
Israel	13	58	249	0
Egypt	13	0	0	0
Saudi Arabia	0	88	74	0
South Korea	1	0	212	1
Jordan	0	0	98	0
Morocco	0	0	17	0
Thailand	0	50	89	2
Taiwan	8	41	0	0

Even when utilizing this rudimentary approach certain distortions tend to arise. We have only fragmentary information on Soviet transactions in several categories—e.g., training costs incurred by the Soviet Union for Third World programs, costs associated with improvement of bases, and the dollar value of uniforms and other accoutrements sold to Third World countries. As a result, most specialists tend to underestimate the total dollar value of military supply transfers by the Soviet Union and its Warsaw Pact allies for any given period of time.

Finally in comparing United States and Soviet arms transfer activities the question of purposes, goals and motivation should be addressed. The approach that has prevailed within the US Government over the past two decades has been to shift the emphasis of programs from grant military assistance (MAP) to sales arrangements. The rationale for this approach is grounded in: (1) legislation—which directed the President to shift progressively to developing countries more of the burden of their total defense costs as their economies grow; (2) the desire to reduce both the dollar size of grant military programs, as well as the number of such beneficiaries; and (3) the expectation that, by shifting towards credit/cash sales, purchasers would have to weigh the overall budgetary implications of contemplated new military acquisitions. It was the hope and expectation of senior US officials that the shift to sales would foster an effort on the part of other governments to bring local defense budgets under stringent scrutiny.

A number of factors have worked to produce somewhat less promising results—notably, proliferating local and regional crises which, in turn, have generated urgent military procurement requirements; the unrestrained transfer of military equipment by the Soviet Union to several Third World countries, which has threatened local military balances; the growing desire of some energy producing countries with substantial oil reserves to modernize their military forces; and dramatic economic growth in a number of non-oil producing Third World countries which has afforded them opportunities to upgrade the combat capabilities of their military establishments.

The goals and objectives of the Soviet Union with respect to Third World arms transfers have diverged markedly from that of the United States. The Soviet approach warrants separate analysis given Moscow's preeminent position in this field.

Supply Side Soviet Style

Despite difficulties of measurement and analysis, it is clear that the Soviet Union has become the principal supplier to the Third World of weapons and weapons-related items. The value of arms transfer agreements with Third World buyers in 1980 totalled $14.8 billion for the Soviet Union, $12.7 billion for the major Western suppliers (France, the United Kingdom, Italy, and West Germany), $1.3 billion for the non-Soviet Communist nations, and $3.5 billion for the remainder of the world's arms exporters.

In the Third World, from 1977 to 1980 Soviet sales of weapons and weapons-related items rose by about $5.2 billion. During this same period, the value of US arms transfer agreements with the Third World remained relatively constant, rising from $7.0 billion in 1977 to $7.3 billion in 1978, declining modestly thereafter to $6.6 billion in 1980. The value of arms transfer agreements with Third World countries by the major Western European suppliers taken as a whole (France, the United Kingdom, Italy, and West Germany) rose by about 82 percent, from approximately $7 billion in 1977 to $12.7 billion in 1980. Third World arms transfer agreements by Eastern European exporters rose from about $0.9 billion in 1977 to $1.3 billion in 1980.

During the period 1977 through 1980, the Soviet Union entered into arms transfer agreements with 38 Third World countries. Soviet arms sales were focused primarily on strategically located countries in North Africa, the Middle East, and South Asia—principally Libya, Algeria, Iraq, Syria, and India. Sales to these countries accounted for the great bulk of Soviet sales to the Third World over the four year period of this study. The Soviets were the largest arms supplier to sub-Saharan Africa, for example, with Ethiopia accounting for well over half of Soviet transactions in the region. In East Asia, the primary Soviet arms agreements were with Vietnam. The second largest East Asian recipient was North Korea. During this same period, Soviet arms agreements with Latin America were exceeded only by those of France, Cuba being the major Latin American recipient of Soviet Arms.*

Soviet motives in providing military equipment to Third World countries involve a complex mix. High priority is assigned to recipients which have entered into friendship agreements with Moscow, and feel threatened by internal dissidence or powerful neighbors (Ethiopia, Syria, Vietnam, and India). Other recipients are clearly the beneficiaries of policies and actions intended to destabilize regional balances (Libya and Cuba). The Soviet arms supply relationship with Libya has involved agreements to deliver more than $12 billion in equipment, which is clearly excessive when examined against the miniscule size of that country's population (less than 3 million) and its relatively modest military establishment. In the case of Cuba, a major weapons delivery program has recently been concluded which would upgrade that country's armed forces over the next five years, as well as bolster the capabilities of Cuba's 500,000-man militia force. In addition, it is not unreasonable to assume that Havana has exacted arms compensation from Moscow to offset losses of Cuban forces serving in Angola and Ethiopia, as well as to defray transfers to Nicaragua and "liberation groups" in El Salvador and other Central American countries.

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*In 1981, the Soviets concluded arms sales agreements with 18 countries in the Third World. The largest agreements in dollar terms were reached with two countries in the Middle East/North Africa area—Libya and Algeria. In South Asia, the Soviet Union concluded major sales agreements with India—its third largest customer in 1980—and also sold significant amounts of arms to Afghanistan. Also in 1980, the Soviet Union was the largest arms supplier to sub-Saharan Africa. Its primary sales agreements in this region were with Ethiopia, Tanzania, Guinea, and Angola. In Latin America, Soviet sales to Cuba and Peru exceeded US sales to all of Latin America.

Particularly noteworthy among Soviet objectives is a familiar capitalist imperative—to acquire hard currencies in order to meet balance of payments deficits resulting from trade with the United States and Western Europe. The importance that the Soviet Union assigns to its commerce in arms is reflected in the terms of several credit agreements it has recently concluded. These agreements provide for repayment over ten years, at two percent interest—which is substantially below the prevailing market rate of that for US Government credits. Interestingly, Soviet agreements with oil producing countries have almost always been concluded on a cash (hard currency) basis. Countries that are particularly hardpressed with respect to foreign currencies—for example, Ethiopia—have tended to mortgage their future agricultural and other exports in exchange for Soviet armaments. The latter are long-term arrangements that resemble traditional barter agreements.

In addition to motivation, objectives and terms, the Soviet approach to arms transfers diverges markedly from that of the United States with respect to structure of transfer relationships. By structure we include not only the basic weapon being sold, but also spare parts packages, ammunition, training and ancillary forms of support. The approach of the US Government generally is to arrange sales on a total systems basis, and to plan to provide backup support for the entire life-cycle of the system being sold. In gross terms, the dollar value of most weapons systems sold by the US Government tends to divide proportionately into the following categories—35 percent to pay for the acquisition of the system, 35 percent for spare parts and ammunition, and the remainder for training, advisory and related services. The Soviet Union, by comparison, allocates 70-80 percent to the cost of acquiring the military item, and proportionately less to maintenance, training and other forms of support. While the reasons for this short-leash approach are difficult to divine, it is entirely possible that the Soviet Union believes that it derives major advantages in terms of recipient dependency.* On the other hand, the Soviet Union must also count on a high irritability quotient in its relationship with purchasing countries.

Of more than passing interest as well has been the dramatic increase in sophistication of weapons sold by the Soviet Union to Third World countries. Within recent years, this has included heavy tanks, aircraft, and multi-tube artillery which either has not been made available or not made available in appreciable quantities to Warsaw Pact members. The transfer of more than $2 billion in military items to Ethiopia, as part of Moscow's effort to re-equip Addis Ababa's army, navy, and air force (until 1977 largely dependent on the United States for military supplies) illustrates the lengths to which the Soviet Union is prepared to proceed in efforts to buttress favored clients. The armed forces of Ethiopia, as a result, have grown prodigiously in both size and inventory holdings—but without any notable success in absorbing, operating and maintaining Soviet supplied material without support from Soviet, Cuban, and East European advisors. The Ethiopian case is a function of power politics, rather than of commercial considerations.

There is little reason to believe that the Soviet Union will not persist during the decade of the Eighties in its efforts to secure political influence in the Third World through conventional arms transfers. A number of factors impell the Soviet Union to use arms as a major instrument of policy, including new targets of opportunity that are certain to arise in an increasingly turbulent world, and the desire of socialist clients to expand their spheres of influence. Unlike the United States, which has a constricted military-industrial production base, Soviet military industrial capabilities are well established and accorded high priority in the Soviet industrial planning system. As the Soviet Union launches new weapons programs for units stationed in Europe and on the Chinese border, used equipment can be made available for sale to Third World countries. Moreover, should Third World demand grow, older production lines can be kept open, and older equipment upgraded through modifications—e.g., improvement of MIG-21 avionics, increased ranges from helicopters, and enhanced fire power and power packages for medium tanks such as the T-54/55. While domestic economic considerations could produce a change in approach, the Soviet Union can, for the time being, maintain older lines without seriously impairing its own force improvement programs.**

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*In addition, it should be noted this approach is consonant with traditional Soviet maintenance procedures—i.e., to have overhaul and maintenance conducted at rear echelons, including the original plant of manufacture.

**The Soviets do keep older equipment in production strictly for export, and periodically upgrade it to stay abreast of Third World demand. The MIG-21 is probably the best-known case of this. Weapons standardization within the Warsaw Pact and the Soviet practice of having one of the other members pick up production of an older weapon when the Soviets move to a newer model, such as the Polish production of the venerable T-55 tank, is another factor. For the export market, this broadening of the production base has the effect of lengthening the time span over which a Soviet-designed weapon can be supported with spares. Moreover, the Soviets create downgraded "export versions" of many of their first-line weapons systems to cater to foreign demand for "the best," while lowering the risk of compromising their latest technology. Allocating production capacity for exports along with that devoted to their own force modernization program seems to have posed no problem to the Soviets so far.

Where foreign purchasers wish to acquire advanced weapons, the Soviet Union is prepared to acquiesce if hard currencies are involved. What makes Soviet arms packages more attractive than those offered by the West is a combination of advanced weaponry and compressed lag-time between contractual agreement and delivery. With its wide production base and substantial sealift capacity, Third World countries purchasing from Moscow are assured of availability of advanced weapons systems several years before neighbors seeking early delivery of United States equipment. Moreover, where older generation Russian equipment is involved the Third World purchaser can look to other Warsaw Pact countries for logistics support, since standardization of equipment within Warsaw Pact forces is accorded the highest priority by the Soviet Union. Older equipment also tends to be more rugged and simple to maintain than its Western contemporaries.

The American Response

The response of the US Government to the mounting Third World arms transfer activities by the Soviet Union has been balanced and cautious. While some observers charge the Reagan Administration with the adoption of an "overly permissive" attitude toward American arms sales, the record does not lend credence to these charges. During fiscal year 1981, the dollar level of FMS agreements was $4.8 billion, as compared to $9.6 billion in the previous fiscal year. While significant increases in military sales agreements did occur in several countries—notably Morocco, Tunisia, and Sudan—these were consonant with the plans and assurances of the Carter Administration. On the whole, the United States Government continues to scrutinize each arms transfer request with great care and has issued no signals suggesting a wish to engage in arms export competition with the Soviet Union.

While critics of the US program charge that the Reagan Administration is prepared to make US programs somewhat akin to an "international military food stamp program," senior American officials have repeatedly stressed the interest of the United States in arms transfers restraint. Under Secretary of the State James L. Buckley, who is responsible for policy oversight in the security assistance field, offered the following assurance in July 1981:

> ". . .a recognition of the role that arms transfers can play in the shifting world environment to help achieve our international objectives does not represent a retreat from a desire for greater restraint in the global dissemination of sophisticated weapons. We remain convinced that such restraint is a goal worth pursuing provided it is not unilateral and does not sacrifice fundamental American interests. We remain prepared to examine ways to pursue a regime of multilateral restraint and to consider seriously the proposals of others. We are not prepared, however, to sacrifice American interests and the interests of our friends abroad by seeking to go it alone."*

In addition, the US Government has established fairly consistent criteria in considering requests to purchase military equipment. These include the following:

Political

- The role the recipient country plays regionally and what interests it has in common with the United States, and where these interests diverge.
- Whether the proposed assistance program achieves American objectives more effectively and at less cost than other resource transfer programs or political measures that the United States or others might take to assist the country in question.
- The influence that a particular program provides, including restraints that might be important in guiding the parties in conflict situations.
- Whether a particular assistance program would set a precedent which could lead to further requests from the recipient or similar requests from other countries.
- The current and foreseeable internal stability of a country and its capacity to maintain that stability so as to effectively utilize the assistance being proposed.
- The disadvantages of not assisting a country with which the United States enjoys good relations, and steps that might be taken to mitigate these disadvantages other than the provision of bilateral foreign aid.

Economic

- Whether the proposed assistance is consistent with the country's development goals, US judgement concerning the reality of those goals, the extent to which American assistance can be employed to influence adoption of what the United States believes to be more realistic goals.
- Whether certain types of assistance, such as an arms sale might strain the country's ability to manage its debt obligation or entail operations and maintenance costs that could produce excessive claims on future budgets.

Military

- The threat that the military equipment is expected to counter or deter, whether the US Government agrees on the nature of the threat, and how it relates to American security.
- How the proposed transfer affects a regional military balance and regional tensions.
- Whether the recipient country has the capability to absorb and utilize the arms/equipment effectively.
- Whether third country sources of supply might better meet the recipient's needs and the prospects for such third country assistance.
- Whether demonstrably vital US basing facilities are dependent upon enhanced military capabilities by the host government requiring arms transfers or other assistance programs.
- The potential impact of the arms transfers on the US production base and the additional burden the sale places on US government staff resources.

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*Statement before the Senate Foreign Relations Committee, July 28, 1981.

Arms Control

- The extent to which the proposed sale will contribute to an arms race; will increase the possibility of outbreak or escalation of conflict; or will prejudice the development of bilateral or multilateral arms control arangements.

That these criteria have been applied with some measure of consistency is reflected in data available on global weapons deliveries to Third World countries over the past several years. The value of the worldwide deliveries of weapons and weapons-related items to the Third World rose in four years by about 25 percent, from an estimated $15.1 billion in 1977 to $18.8 billion in 1980. The value of Soviet deliveries rose by 46 percent, from an estimated $5.0 billion in 1977 to a record high of $9.1 billion in 1979 before receding to a level of about $7.3 billion in 1980. During this same time frame, the value of US deliveries declined by about 41 percent, from $5.7 billion in 1977 to $3.4 billion in 1980.

Despite allegations to the contrary, the conclusion is inescapable that within the US Government decisions on arms transfers to Third World countries are taken with great deliberation and on a case-by-case basis. Moreover, given the limited budgetary resources available, these decisions are taken within the framework of a demanding adversary process. Finally, full recognition exists that American objectives are poorly served by broad or general policies—that there is no substitute for an understanding of our national interests, careful judgment, and willingness to be selective where arms transfers are concerned. If any phrase best captures the approach of the US Government at this time, it is a sense of national purpose leavened by prudence.

CHAPTER III

POLITICO-MILITARY EFFECTS OF ARMS TRANSFERS ON SUPPLIER AND RECIPIENT STATES

The volume and direction of the international arms trade have not been determined exclusively, or even largely, by the decisions of any single group of countries, arms suppliers or arms recipients. It is true that there would be no arms trade without the demand for foreign-produced arms by recipient states--and without the security needs and political concerns which give rise to those demands. But it is equally true that no transfers would occur if arms-producing states did not believe important national objectives could be achieved by making arms available to those recipients. Thus, the international trade in conventional arms can be seen as a complex interaction between supply and demand--between the varied political, military, and economic interests of supplier and recipient states.[1]

Arms transfers often further the politico-military interests of suppliers and recipients, but the objectives of weapons transfer programs may not always be met. The supply or the acquisition of arms frequently involves risks as well as benefits and, under certain circumstances, may have adverse effects on supplier and recipient states. While the outcomes of weapons transfers are usually difficult to predict, some general conclusions can be drawn regarding the circumstances under which the objectives of supplier and recipient governments are most likely to be achieved.

Before looking at the objectives and risks of arms transfers, it is important to point out that the transfer of arms is only one aspect, and often a rather small aspect, of the overall politico-military relationship between governments. Given the broad context of interstate relations within which arms transfers take place and the multitude of additional factors which make up that context, it is often extremely difficult to separate out with any precision the impact of arms transfers. This difficulty should be kept in mind in the following discussion.

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[1] This chapter deals with only the politico-military effects of arms transfers. The economic impact on suppliers and recipients will be discussed in Chapter V.

At head of title: 93d Cong., 2d sess. Committee print.

Reproduced from U.S. Arms Control and Disarmament Agency. The international transfer of conventional arms: a report to the Congress. Washington, U.S. Govt. Print. Off., 1974. p. 43-82.

SUPPLIER STATES

Supplier governments seek, and may achieve, a wide variety of military and political objectives through the transfer of conventional arms, although it would be misleading in some instances to regard these objectives as exclusively military or political in nature. Let us look first at the military objectives of suppliers. These objectives may include improving the military capabilities of arms recipients, acquiring access to overseas military facilities for the supplier's own use, or seeking to influence the military activities of arms recipients.

With respect to improving the military capabilities of recipients, suppliers have provided large amounts of arms to recipients which have been formally allied to them through bilateral or multilateral mutual defense agreements. Transfers to allies--including NATO and SEATO members as well as such mutual defense partners as the Republic of Korea, the Republic of China, the Philippines, and Japan--have been a major component of U.S. arms exports, with the aim of enhancing the overall strength and effectiveness of the U.S. alliance network. During the past few years, the emphasis of U.S. transfer policy under the Nixon Doctrine has been on improving the self-defense capabilities of allied states and thereby reducing the likelihood of direct involvement of U.S. forces. Mutual defense ties have also formed the basis for Soviet arms transfers to Warsaw Pact members. Similarly, France's security commitments to many of its former colonies have provided the framework for a sizeable portion of French supplies to Africa.

The major suppliers have also transferred large quantities of arms in the absence of formal mutual defense ties. By strengthening the military capabilities of these recipients, suppliers have enabled them to pursue a wide range of objectives and in so doing, have often sought to further their own foreign policy interests. In a number of cases, weapons acquired from abroad have contributed to the ability of recipient armed forces to defend against external threats and to preserve regional military balances. In some cases, foreign weapons have provided the wherewithal for recipient governments to upset existing power relationships. Moreover, some supplier states have given material support to revolutionary groups, sometimes directly, but often through third parties. For example, the Algerian and Congolese rebels, other African dissident elements, and Palestinian guerrillas all received weapons from external sources. Arms transfers have also been used by supplier governments to support favored participants in ongoing armed conflicts, such as the Vietnam war and the Nigerian civil war.

Through the transfer of arms, suppliers may also strengthen a friendly recipient's capability to deal with internal security threats. In addition to protecting the supplier's political, military, and economic interests in the recipient country, such transfers can help prevent domestic disturbances from spilling over borders and having adverse effects on regional stability.

It should be pointed out, however, that merely transferring arms does not guarantee an improvement in the recipient's military capabilities. In order to be able to transform military hardware acquisitions into improved capabilities--both against external or internal threats--recipient states must have the requisite human and material resources, including capable leadership, high armed forces morale, sufficient political will and economic capacity, and adequate technical skills.

It should also be recognized that while the supplier's objective of strengthening the military capabilities of allied or friendly states has usually been furthered by arms transfers, this objective may be offset by arms acquisitions of the recipient's regional adversaries. After a round of competitive acquisitions, the recipient's security position may sometimes be less favorable than before the original deliveries.

Moreover, foreign-produced weapons may at times be used in a manner not intended by the supplying state, in some instances contrary to its political and security interests. Despite tacit or formal assurances concerning the end uses or missions of weapons transfers, recipients have in some cases deployed and utilized their arms acquisitions according to their own independent perceptions of threat and national interest. Weapons supplied under the assumption or explicit stipulation that they be employed in an external defense role have occasionally been diverted to assist in the suppression of domestic dissident groups. Arms provided for internal security purposes have found their way into international disputes. And arms transferred to strengthen a recipient's military capabilities against one adversary have been used against another, contrary to the wishes of the supplier government. In addition, weapons have, in some instances, fallen into the hands of unintended recipients, either in violation of end-use restrictions or by exploiting loopholes in those restrictions. Diversions from intended uses can be a source of embarrassment to supplier governments and may do harm to their political interests. Although these unintended uses have occurred in some instances, it should be noted that end-use controls, especially those imposed by the U.S., have generally been effective.

In addition to improving the military capabilities of friends or allies, arms transfers may play a role in helping supplier governments acquire or secure access to overseas military facilities, including such assets as military bases or base rights, landing privileges, refueling stations, overflight rights, and communications and tracking stations. These facilities are sometimes made available to suppliers as part of an overall mutual defense or mutual assistance arrangement, without any direct link between the availability of the military facility and the transfer of arms. On other occasions, arms supplies may be explicitly related to the acquisition or maintenance of these rights and installations.

While access to or possession of overseas military facilities has normally been regarded by supplier governments as advantageous, these facilities can also involve risks. Once the supplier's armed forces begin to rely on the use of those facilities, the recipient may demand a higher price for continued access than would otherwise have been the case, either in terms of weapons transfers, rental payments, or related concessions. Moreover, supplier country personnel and facilities may become the focus of nationalistic, anti-supplier sentiment within recipient states.

An additional objective of arms transfers--and the associated support services frequently provided by suppliers--may be to give supplier governments a degree of influence in the military affairs of recipient states. By agreeing to furnish only certain weapon systems, and denying others, suppliers may be able to restrict the military capabilities and options of recipients, especially when there are no alternative sources of supply--a situation which is becoming increasingly rare. Because recipients usually cannot manufacture their own spare parts and other logistic support items, they may be dependent upon suppliers for a continued flow of such material. This dependence could limit the ability of recipients to conduct extended military operations without the supplier's approval. For example, Pakistan's acceptance of a cease-fire in the 1965 conflict over Kashmir--following the United States embargo of arms shipments to participants in the dispute--can be attributed partially to Pakistan's dependence on U.S. spare parts and ammunition. Moreover, advanced weapons transfers are often accompanied by supplier country technicians and advisers to train local personnel, to service the weapons systems, and even, in some instances, to operate them. The greater the degree of technical support made available by the supplier, the greater will be its ability to influence recipient military activities, especially in the short run.

On the other hand, the presence of supplier country advisers and technicians on recipient territory may occasionally increase the risk that supplier military forces will be drawn into armed conflict as a result of an arms transfer relationship. But it should be pointed out that to date no supplier government has actually been drawn into armed conflict as a result of arms transfer ties. In those cases where suppliers have committed forces directly on behalf of arms recipients, the involvement can be attributed to a deliberate decision in support of the supplier's perceived security interests, rather than to an inadvertent involvement resulting from arms transfers.

In general, a supplier government's ability to exercise some control over the recipient's military options through arms transfers is enhanced when a recipient does not have an alternative source for the desired weapons systems. However, even when other able and willing suppliers are available, a supplier may still be able to influence the options of a recipient which has customarily relied on it for weapons, training, repair, and other support services. Such a recipient may often settle for the weapons its traditional supplier is willing to provide, rather than disrupt the existing supply relationship in order to acquire its first-choice systems from other producers. Recipients may also have economic reasons--such as the availability of arms on a grant or a favorable credit basis--for accepting less than their preferred weapons systems.

Although the increasing number of arms supplying states and the growing affluence of some developing countries have reduced significantly the supplier's opportunities to determine which weapons the recipient will acquire, the supplier may, once deliveries are made, have some degree of influence over the recipient's military capabilities as a result of weapons training programs, the presence of military advisers, the recipient's increased familiarity with the supplier country's military doctrines and practices, and the dependency on the supplier country's support system.

The ability to influence the military capabilities of recipients may also be substantial when recipients are involved in armed conflicts. On these occasions, the supplier's ability to urge restraint may be strengthened by its control of spare parts, the difficulties that would be encountered by the recipient in changing sources of supply and learning how to use new equipment in a short time period, and the reduced number of supplying states which are willing to provide weapons to areas of conflict.

Attempting to constrain a recipient's military capabilities during conflict situations may, however, involve risks to the supplier. Because suppliers hope to further their own interests by improving the military capabilities of recipients, those interests could be jeopardized by a sudden discontinuance of arms supplies and spare parts. Such a cut-off--motivated perhaps by a supplier's wish to exert pressure for restraint during a crisis--could leave the recipient highly vulnerable and, if hostilities occur, the supplier's interests, not just those of the recipient, would suffer.

Next let us look at the political benefits which supplier governments seek to achieve through arms transfers. While military benefits such as the improvement of alliance defense capabilities and the acquisition of overseas base rights are, to a large extent, tangible and measurable, the political role of arms transfers is more difficult to assess.

Arms transfers are often regarded by suppliers, as well as recipients, as simply one contributing factor to a normal, mutually beneficial relationship between sovereign states, similar in many respects to economic assistance and commercial ties. At a somewhat more ambitious level, arms transfers may be used as a special means of gaining access to areas where the supplier government's political presence had previously been limited. Through arms supply relationships suppliers may also seek to establish closer relations with countries in which they already have important political and economic interests. For example, U.S. and British weapons exports to some of the Persian Gulf states, French arms to certain black African states, and Belgian transfers to Zaire have been one of the factors helping to maintain political ties in areas where important economic interests were involved.

Arms transfers may also provide an opportunity for supplier governments to show support for friendly recipient governments or to enhance the credibility of security pledges to allies. Through arms transfers, suppliers may strengthen the ability of recipient governments to maintain certain policies or political orientations. For example, military exports have been among the factors deepening the relationships between the Jordanian and Saudi Arabian governments, on the one hand, and the U.S. and other Western nations, on the other.

Supplier governments may use arms transfers not only to establish their own political influence, but to weaken the influence and contacts of their rivals, either in a single country or in a region. By undermining a rival's position as a monopoly supplier, supplier governments may limit the rival's opportunities for exerting influence, and thereby give recipient states the opportunity to adopt a more independent posture.

In addition to the political utility of arms transfers in the bilateral relations of supplier governments, arms transfer programs may enable suppliers to establish and maintain preferred international images of themselves, images which are intended to enhance their reputation and standing throughout the world. In this respect, the French, by presenting themselves as an alternative to the two superpowers as a source of supply, have bolstered their reputation as an independent force in world politics. Similarly, the Swedes have used arms exports to demonstrate their support for the policy of non-alignment. And the Communist suppliers have regarded weapons transfers as means of projecting the image of champions of world revolution.

On a more specific level, weapons may be traded for explicit political or economic benefits. Commercial agreements have on occasion been quid pro quos for the transfer of arms, especially from some of the middle-sized European producers. In a few cases, the recipient government's willingness to join the supplier in a treaty commitment or some other formal obligation has been a precondition for the provision of arms.

By establishing contacts with important recipient country leaders, particularly military leaders, through the provision of arms as well as technical assistance, training, and other programs which are often associated with such transfers, suppliers may strengthen ties with recipient states. After frequent association with supplier country military personnel--either during training programs at supplier country military schools and installations or at home--recipient military leaders may become more "pro-supplier" in their professional and political orientations.

The friendships and allegiances that develop as a result of this interaction between the military establishments of the two countries may often yield significant returns to the supplier government. When the recipient military needs advice or wishes to acquire additional military equipment, it may be inclined to turn to suppliers with whom close working relationships have been established. Where military officers play an important political role in recipient government affairs--as they do in many developing countries--these contacts can be particularly important.

It should be recognized, however, that the promotion of political objectives through the transfer of arms may sometimes work to the supplier government's disadvantage. Because arms transactions have tended to link suppliers not only with recipient governments, but with their domestic and international policies, some suppliers have received considerable criticism for providing arms to unpopular regimes. In addition, a supplier's reputation can be damaged by a principal recipient's poor military performance.

By furnishing arms to a particular government, suppliers may also risk a deterioration of their relations with that government's adversaries and increase the chances that those adversaries will turn to rival suppliers for military assistance. Thus, after the U.S. began to provide military assistance to India in 1962, relations between the U.S. and Pakistan suffered and Pakistan turned increasingly toward the PRC and Western European suppliers.

By establishing close ties with an incumbent regime through arms transfers, suppliers may jeopardize relations not only with the recipient's regional rivals, but with its domestic opposition. Hence, a change in government may be accompanied by a worsening of relations with the former supplier. When the Iraqi monarchy was overthrown in 1958, relations between Iraq and its former Western arms suppliers suffered. In 1966, after the fall of Nkrumah, whose Presidential Guard was equipped by the USSR, Soviet military advisers were expelled from Ghana.

While the transfer of arms may sometimes involve risks for the supplier government, the refusal to provide arms may also work to its disadvantage. The government requesting arms may regard such a refusal as an unfriendly act, thus creating a certain amount of ill will between the states. Similarly, the decision to withhold arms supplies to all parties to a conflict may be taken as a gesture of support or favoritism for one side or the other.

Over the long run, the links which may be created through arms transfers--such as professional and personal ties with members of the recipient's military establishment, commercial and political *quid pro quos*, and constructive working relationships with recipient governments--can lead to a greater interdependence between suppliers and recipients and increase their influence on one another's actions.

However, the type of influence which can be achieved by establishing mutually beneficial relationships in this manner differs from an ability to persuade recipients to take actions against their own will. At times, arms transfer relationships may give supplier governments this second type of influence, or leverage, over the affairs of recipient states. This leverage usually results from the recipient's dependence on a single supplier for a major portion of its military acquisitions. Because of this dependence, recipients may be reluctant to take actions which are incompatible with the desires of their principal arms providers, fearing that arms shipments might be curtailed. However, attempts to exercise such leverage --especially those attempts which involve the suspension or threat of suspending further shipments--may not only fail, but may strain supplier-recipient relations, lead to considerable resentment toward the supplier, and even drive the recipient to a new source of supply. In this regard, instead of giving the U.S. additional influence with Pakistan, the arms embargo of 1965 encouraged the Pakistanis to rely more heavily on other suppliers.

The ability to exert leverage over recipient actions is difficult to achieve and will probably become even more so. Such an ability can rarely be attributed exclusively to an arms supply dependency, but rather to a series of additional factors--including trade, economic aid, investment, treaty commitments, military strength, ideology, and geographic proximity--which collectively determine the patterns of influence among states. In the absence of these other factors which create and reinforce dependency, arms transfers may still provide suppliers with a measure of leverage, but the opportunities for exerting leverage will be limited and often short-lived. On relatively minor issues, a recipient may be reluctant to ignore the concerns of its principal or sole supplier for fear of endangering the continued flow of arms. However, when the issue is viewed as a crucial one, recipients may reject supplier attempts at leverage, regardless of the consequences for further arms shipments.

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The political and military effects of the arms transfer programs of supplier governments may sometimes be unforeseeable, the result of chance occurrences or third-party actions. Nevertheless, the experience of recent years seems to provide a few generalizations concerning the circumstances under which the objectives of arms transfers are more likely to be achieved and the costs or risks minimized.

There is evidence that the greater the compatibility between the national interests of supplier and recipient states, the greater will be the likelihood that the transfer of arms will serve the objectives of the supplier state. For the arms transfer relationship to be mutually beneficial, those interests need not be identical. As long as there is a substantial convergence of interests, both parties can benefit, at least in the short run. In 1958, Soviet and Iraqi interests were far from identical; but Iraq's desire to break with the West coincided with the Soviet Union's objective of weakening the Western alliance system on its southern border, and a mutually advantageous military aid agreement was signed.

Conversely, the smaller the overlap in supplier and recipient interests, the greater is the possibility that contradictory elements in the policies of the two governments sooner or later will come to the surface and strains will develop. In these situations, suppliers must face the risk that recipients will oppose their wishes and that they will be associated with, or perhaps even involved in, actions the recipients may take.

Because states with similar interests tend to form alliances and the alliance relationship itself tends to reinforce that convergence of interests, the risks of arms transfers are most likely to be reduced in an alliance context. In such a context, the commitment to recipients is a deliberate one; whereas outside the alliance context arms transfer relationships may create the risk of inadvertent supplier commitment. Although the allied supplier's reputation is at stake, joint military planning and other cooperative activities reduce the likelihood that a recipient's independent action will damage its reputation. And although there may be highly visible supplier presence on recipient territory, that presence is formalized in a treaty, openly acknowledged in most cases as bringing certain benefits to the recipient, and therefore less likely to be a source of friction.

It should be stressed that there is no assurance that arms transfers will contribute effectively to supplier objectives in an alliance situation, only that in such a situation some of the more troublesome risks may be minimized. And by the same token, nothing here should be taken to suggest that arms transfers cannot bring significant politico-military rewards outside the alliance context--just that the attempt to achieve those rewards may be accompanied by greater risks.

In addition to the question of compatibility between supplier and recipient interests, the utility of arms transfers to supplier governments has been influenced by two related trends: the growing number of arms exporting states and the increasing flexibility of international relations. Not only are desired weapons systems available from more sources, but ideological and other political considerations are less likely today to limit a supplier's willingness to provide arms. These developments have increased recipients' sources of supply and thus have decreased the ability of supplier governments to use arms transfers as means of exacting political concessions from recipients.

While these two trends have reduced opportunities for exerting leverage over individual recipients, they have made it possible for suppliers to use arms transfers to pursue a number of objectives--such as establishing and strengthening constructive relationships--with a larger number of recipient states. In the past, arms transfers most often reflected the political alignments and orientations of suppliers and recipients. With the increasing flexibility and pragmatism of international affairs as well as the growing number of arms suppliers, some of the ideological and political barriers to arms transfer relationships have been relaxed and a supplier's opportunities for promoting its international interests more widely through arms transfers have improved.

RECIPIENT STATES

From the perspective of the recipients of arms, the most important function of arms acquisitions is to enable them to maintain armed forces to meet external and internal security requirements. For those recipients which lack an indigenous arms production capability, importing military equipment is often the only means of providing for the national defense.

The military objectives of recipient states vary widely. Recipients may seek arms to deter aggression by other states, to pursue their own expansionist policies, to wage war, and to maintain internal security. Insurgent groups acquire foreign weapons in order to challenge the authority of existing regimes. The statistics of the arms trade indicate that recipient states which have encountered the most serious threats or have been involved in internal or external conflicts have received the largest share of world totals.

Although the acquisition of foreign-produced arms has usually been an essential element in the national security planning of recipient governments, it may also involve certain risks and drawbacks. Because recipient country force planners must rely on weapons which suppliers are able and willing to make available, they may often be unable to acquire systems which they have requested in order to meet perceived military requirements. At times, suppliers may be reluctant to furnish weapons which they believe are too advanced for the recipient's technical capabilities. In addition, either because of inadequate force planning or the difficulty of adapting developed country weapons to developing country needs, recipients may request and receive weapons which turn out to be inappropriate for most likely military missions, local terrain or climatic conditions, or the level of indigenous technical skills.

While the growing number of arms-supplying states has made it easier for many recipients to acquire desired weapons systems, there are circumstances under which it may be difficult to obtain such systems and to retain freedom of action in their use. The more advanced the recipient's hardware requirements, the fewer will be the available sources of supply and consequently the more limited the recipient's freedom of action and bargaining power. Moreover, advanced systems often require that suppliers furnish training and support services, which may curb to some degree the recipient's independence of action.

In addition, even when the option to switch suppliers exists, recipients which have grown accustomed to a particular supplier's equipment may be reluctant to shift sources unless they feel there are compelling reasons to do so. Economic considerations may also limit a recipient's ability to turn to alternate suppliers. If a recipient can obtain military equipment on a grant or barter basis or on favorable financial terms, it may often be willing to settle for less than its optimal military requirements.

A recipient's acquisition of foreign-produced weapons may stimulate arms imports by neighboring adversaries, making the threats to its security at least as great or even more serious than before. Recipients may face the risk, especially serious during conflict situations, that suppliers will place restrictions on their actions by regulating the flow of spare parts and other logistic support items. In those cases where the recipient regards the transfer of arms as an implicit commitment by the supplier government to its security, the abrupt suspension of arms supplies may place the recipient in a particularly vulnerable position. Some recipients have anticipated this problem by insisting that sizeable quantities of spare parts and other logistic support items be included in the original arms transactions. But suppliers are often reluctant to make available sufficient quantities of these items to support sustained combat operations.

In addition to military benefits and risks, arms acquisitions may have important political effects on recipient states. For most recipients which are members of alliances, arms transfers can contribute to the military security of the recipient and its allies, but are less significant as instruments for pursuing separate political objectives. Indeed, because the interests and objectives of alliance members are usually in consonance, these recipients normally have little need or inclination to pursue separate goals through arms acquisitions. However, other recipients--particularly those which are not linked to a single supplier through alliance ties or other circumstances--may have greater flexibility, and a greater desire, to use arms acquisitions in a variety of foreign policy roles.

Sources of military equipment may be chosen because of the recipient's intention to establish closer relations with those supplier countries, as one among several means of developing and cementing bilateral ties. Recipients may also use arms acquisitions to emphasize or reinforce particular foreign policy positions, sometimes in a rather dramatic fashion. In a move which radically altered Middle Eastern politics, Egypt, unable to obtain satisfaction from the West, signaled its shift from traditional Western suppliers by concluding an arms deal with Czechoslovakia in 1955. Similarly, Romania's decision in 1970 to import French helicopters was a part of that country's effort to expand its contacts outside the Soviet bloc.

In other cases--such as Algeria in North Africa and Iran in the Persian Gulf area--arms acquisitions have been used by recipient governments to strengthen their claims to regional leadership.

Some recipients carefully avoid the pitfalls of relying on a single major power supplier, and a few even are able to exert a considerable degree of influence over supplier actions. Recognizing that many suppliers fear the loss of influence to rival suppliers even more than they value the presumed political rewards of arms transfers, some recipients play competing suppliers off against one another in order to obtain the most favorable terms. The threat to turn to an alternate supplier may occasionally allow recipients to acquire more advanced weapons than the supplier would otherwise be willing to provide, to pay a lower price than suppliers ordinarily demand, and even to exact political and commercial concessions from supplier governments.

With regard to the impact on the domestic affairs of recipient states, the acquisition of foreign-produced arms may assure the local population that the security needs of the nation are being adequately met. Thus, domestic confidence in the recipient regime as well as its popularity and stature can be raised by advantageous arms transactions. Recipient regimes may gain the support of certain domestic political groups by purchasing arms from suppliers sharing the political orientation of those groups. At the same time that arms acquisitions enable recipient governments to meet their security requirements, they may provide the opportunity to satisfy the equipment demands of the military services and thereby increase support for the regime within the armed forces. By helping to strengthen the domestic position of the recipient regime, arms transfers may contribute to a more stable political environment and thus create a climate favorable to economic and social development. To the extent that a regime's willingness to negotiate outstanding differences with its neighbors depends on self-confidence and domestic stability, arms transfers may also facilitate progress toward the peaceful resolution of disputes.

On the other hand, arms imports may involve a number of political risks. Recipient regimes which link themselves closely with particular supplier governments may provoke the antagonism of neighboring states and alienate important sources of internal support--particularly if the regimes permit a large number of supplier country technicians, advisers, and dependents on recipient territory.

Arms acquisitions may also involve certain risks with regard to the recipient's military establishment. If a recipient receives all of its equipment and training from a single supplier, there may be some danger that an officer corps with alien military doctrines, practices, and even loyalties will result.

Recipients may find that arms transfer dependency makes them vulnerable to political pressures from supplier governments. Sometimes they may be required to make specific political or economic concessions in exchange for arms. On other occasions they may have to avoid actions or policies which would displease their principal supplier and provide a justication for curtailing arms shipments.

Finally, although arms transfers may in some cases contribute to a stable environment for economic and social development, they may at other times retard economic growth by diverting domestic resources from more productive uses.[1] They may even help perpetuate a distribution of power and authority in the recipient society which, though conducive to short-term stability, could eventually lead to large-scale internal disorder.

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It is difficult to measure with any degree of precision the overall politico-military utility of arms transfers for recipient states which are members of military alliances. The acquisition of foreign-produced arms certainly plays a role in meeting the security requirements of alliance recipients. However, the degree to which arms transfers help satisfy those requirements--as compared to such aspects of the mutual defense relationship as security guarantees from alliance partners--is often impossible to determine.

For non-alliance recipients, a successful arms acquisition program usually involves obtaining the most desirable foreign-produced weapons from the standpoint o[illegible]tional security needs and available economic resources with[illegible]roviding suppliers many opportunities to restrict their use or to exercise leverage. Using this criterion, prospects for many recipient governments have improved.

Many of the same trends which have reduced suppliers' opportunities for influence in recipient affairs have made it easier for these non-alliance recipients--particularly those not located in areas of conflict or confrontation--to avoid the drawbacks of acquiring foreign arms. The growing number of arms-producing states, the greater ideological and political flexibility of international affairs, and the stronger emphasis on commercial considerations in the arms transfer policies of some supplier governments have all increased the number of states which are willing to provide recipients with desired weapons systems. Not only have these systems become available from more sources, but supplier governments, recognizing that recipients often have the option to acquire arms elsewhere, have been less inclined to try to impose restrictions or exact concessions.

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[1] See chapter V for the economic effects of arms transfers.

CHAPTER IV

THE EFFECTS OF ARMS TRANSFERS ON REGIONAL AND INTERNATIONAL STABILITY

In addition to their political and military effects on individual supplier and recipient states, arms transfers may have an important, sometimes unintended, impact on the stability of recipient regions. However, despite the connection that is often made between weapons transfers and armed conflict, the relationship between the two is frequently quite complicated and subject to considerable misunderstanding.

From time to time statements are made about the arms trade which, though factually correct in themselves, are subject to misleading interpretations. For example, it has been noted by some observers who have investigated the relationship between arms and conflict that most of the world's armed conflicts since 1945--and there have been close to 60--have been fought primarily, and at times exclusively, with foreign-produced weapons. It has also been pointed out that imported armaments have resulted in a higher level of firepower, destruction, and casualties than would otherwise have been possible. These observers have emphasized that those countries and regimes which have received the largest volumes of transfers have generally been the ones which have been located in areas of confrontation or involved in interstate or internal conflict.

But these findings do not provide an adequate explanation of the relationship between the acquisition of arms and the outbreak of conflict. It is certainly not surprising that nations which have consumed vast quantities of arms in combat situations would have acquired high levels of armaments. Nor is it particularly unusual that states which were unable to meet their military needs through domestic production would turn to foreign suppliers. It does not necessarily follow from these observations that arms transfers "cause" wars or even make them more likely.

Regional Responses to Arms Imports

Countries within regions may respond in a variety of ways to the acquisition of foreign arms by their neighbors. In some cases, states may not react at all in a competitive fashion. If they seek additional arms, the requests may be attributable to the normal aging of inventories, internal security threats, domestic pressures, or to other reasons unrelated to the neighbor's importation of weapons.

In other cases, states are acutely aware of a neighbor's acquisition patterns and respond competitively to them. But often this competition is not driven by the serious threat of conflict, but by the desire, occasionally stemming from domestic pressures, to restore approximately the same balance of regional armed forces which existed prior to deliveries to the neighboring state. This does not mean that states which respond in such a fashion do not face external threats, just that the level of political antagonism in the region is relatively low and threats are fairly remote. Only on rare occasions has armed conflict erupted following this pattern of response.

Latin American arms acquisitions have sometimes appeared to fit this pattern. In 1958 Argentina and Brazil placed orders for aircraft carriers within weeks of each other. The same British ship-to-air missile was purchased by Argentina, Brazil, and Chile between 1964 and 1966. And in 1968, after Argentina ordered two submarines from the Federal Republic of Germany, Chile and Brazil countered by each ordering two British subs.

The most highly publicized and potentially most dangerous type of regional situation is one in which competitive arms acquisitions are motivated by political disputes and take place within the context of serious military confrontations. This type of "arms race" is characterized by the attempt to seek politico-military advantages by altering or maintaining the ratio of armed forces in one's favor. Regions which have engaged in this form of competition have received a major portion of international arms transfers and have been generally regarded as the world's potential or actual trouble spots. They have included the Near East, the Indian subcontinent, the Korean peninsula, and Indochina. But even in regions of confrontation, arms imports do not necessarily lead to the outbreak of hostilities. The acquisition of arms is seldom, if ever, the primary cause of armed conflict. The underlying sources of conflict are substantive political disputes, involving such matters as territory, ideology, power, and race. In order to strengthen their positions in such disputes, participants acquire weapons--foreign weapons if they lack the ability to produce their own--thus introducing or making more credible a military option. Whether or not the military option is eventually chosen depends on a number of politico-military considerations, and arms transfers may play only a minor role in these calculations.

Adverse Effects on Stability

Even though arms cannot be regarded as the fundamental cause of war, the acquisition of foreign weapons, under certain circumstances, may make hostilities more likely. For example, the likelihood of armed conflict may increase to some degree when suppliers make arms available to recipients which are dissatisfied with the status quo or recently established frontiers. Foreign weapons can provide increased means for recipients to press their territorial or political interests through force of arms.

In some cases the flow of weapons to an already tense region can further aggravate the situation by raising doubts about the recipient's intentions, particularly when the transfers involve a marked acceleration of a recipient's rate of acquisitions or a sudden shift to a more advanced weapons system. In such a climate of heightened distrust, the chances of miscalculation and precipitate military action may increase.

Arms flows can also alter perceptions by regional states of the local military balance in a manner which makes the initiation of hostilities a more desirable option for one side. In some instances, recipients may reason that new acquisitions have created conditions favorable to military action and, in the absence of prospects for a peaceful settlement, may decide to exploit that advantage on the battlefield. On the other hand, the chances for war can also increase if the recipient's adversary believes that its own military position is deteriorating and may never again be as favorable. Thus, in the period preceding the war over Kashmir in 1965, Pakistan became alarmed when Indian acquisitions seemed to erode what was perceived by the Pakistanis to be their qualitative advantage in such weapons categories as jet aircraft and tanks.

Perceptions regarding military balances can be affected not only by overall levels of armed forces and weapons imports, but also by the specific types of weapons acquired from abroad. The level of anxiety in an area of conflict may be increased by the acquisition of weapons systems which opponents perceive to be threatening, given the particular capabilities of the weapon, the technical and combat skills of the recipient, and the geographic features of the region. It should be noted that regional stability may be influenced more by the opponent's perception of a weapon's likely combat missions than by the actual intentions of the supplier or the recipient. Thus, the transfer of multi-purpose weapons systems may sometimes have unintended adverse effects on regional stability.

In addition, the disclosure of a major arms deal and its accompanying political and psychological effects may often have a greater impact on regional stability than the actual military hardware. The morale boost of an arms agreement with a major supplier as well as the expectations of future support may, on some occasions, make recipients more self-confident and adventuresome in regional affairs.

Favorable Effects on Stability

One can argue that there have been several regions, such as Europe and the Korean peninsula, where the supply of arms to recipients in areas of tension has made the outbreak of hostilities less likely. In the absence of mutual restraint arrangements, the flow of weapons to such areas can play a role in convincing members of the region, particularly those with anti-*status quo* ambitions, that the risks of resorting to force would outweigh whatever gains could be achieved through military action.

The stability of a regional military balance may be reinforced in a number of ways. Sometimes it may involve furnishing a *status quo* power with a sizable and unambiguous superiority in military strength so that regional rivals will recognize the futility of starting a war. In some other instances it may mean altering the military position of a friendly state from one of inferiority to one of parity with its potential adversaries, thus making it a less tempting and vulnerable target for attack. In situations where potential combatants are more equal in military capabilities, stability may be served by not transferring those types of weapons which will be regarded by opponents as provocative or as disruptive of the arms balance and by avoiding abnormally rapid rates of arms supply. In addition, the political and psychological dimensions of arms transfers can sometimes reduce the likelihood of war, either by reassuring a recipient of continued supplies, thereby reducing the risk of desperate actions, or by dissuading an adversary which may have been tempted to strike. Reassuring a recipient or dissuading an adversary may also have the effect of facilitating the peaceful resolution of disputes.

The Role of Major Power Suppliers

Regional stability can be affected--both negatively and positively--by arms transfer relationships between major power suppliers and participants in local disputes. It has previously been mentioned that transfers from a major foreign power may sometimes make recipients more assertive in their foreign relations. When two rival suppliers provide weapons to the same recipient, the consequences for stability can be even worse. The competition can make it difficult for either supplier to restrain the recipient, which may take advantage of the situation by requesting and receiving more advanced weapons at a faster rate than would otherwise be possible. Moreover, the competition for influence between suppliers may make weapons available to feuding parties which normally would be unable to afford them. It should be noted, however, as shown in the preceding discussion, that the impact of weapons on stability also depends upon factors other than the presence of the weapons themselves.

Once hostilities begin, the supply of arms by major powers to combatants may sometimes have the effect of prolonging the conflict and increasing the levels of destruction--assuming that recipients believe that important national goals warrant the continuation of hostilities. The closer ties that often develop between suppliers and recipients during such situations, and the resulting greater stakes that suppliers have in the manner in which the conflict is resolved, can, in some cases, complicate and lengthen the process of reaching a peace settlement.

However, major power suppliers may at times be an important restraining influence in regional disputes. Sometimes they may unilaterally place restrictions on the military capabilities of the recipients of their arms, either to reduce the risk of being drawn into local conflict or to minimize the chances of being charged with contributing to the outbreak of warfare. Arms supplies by major powers can also play a role in deterring their recipients' potential enemies. The potential enemies may reason that in the event of sustained arms conflict their opponents will have the advantage of a guaranteed source of war supplies. They may also be deterred by the possibility that suppliers will intervene on behalf of their recipients, whether or not a formal security commitment exists.

In still other cases, the existence of major powers as suppliers to opposing sides of a local dispute may diminish the likelihood of war. One force motivating arms supply restraint in a number of cases is the fear that regional armed conflict will draw outside powers into a major confrontation with one another. In general, the opportunities for supplier country restraint have improved when there have been limited alternative supply possibilities, when the degree of commitment between suppliers and recipients on both sides of the conflict has been somewhat symmetrical, when the risks of confrontation have been perceived by rival suppliers, and when supplier objectives in the region have not justified accepting those risks.

Of course, some of the conditions which make supplier state moderation more likely--such as the close association between suppliers and their respective recipients as well as the serious possibility of escalation--increase the dangers of major power involvement and the threats to international stability should war actually occur. However, despite several cases where major powers have supplied conventional arms to opposing sides in regional conflicts, there has not been a single instance where arms transfers have led to a direct military confrontation between suppliers.

It might be added that even though taking opposing sides in such conflicts has not led to war between major suppliers, it may in some cases have hampered relations and impeded the resolution of differences between them. On the other hand, it can be argued that such arms supply policies may eventually lead to an improvement in relations between competing suppliers. By demonstrating its intention to support a particular recipient through the transfer of arms, a supplier government may discourage a rival supplier from seeking to alter the power balance through its own arms transfers. Both sides may turn to peaceful means to settle differences as a result.

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Arms transfers are inherently neither stabilizing nor destabilizing. Depending on circumstances, they may increase or decrease the likelihood of hostilities. But while it may be possible to assess the impact of past transfers on regional stability and even to isolate some of the conditions which contributed to that impact, it is more difficult to determine in advance the probable regional effects of future transfers. In many cases--especially those where there is a record of stability, where recipients have security ties to outside powers, where the intensity of the underlying dispute is not so great, and where the arms transferred do not give recipients what is regarded by neighbors as a new or threatening military capability--it is often possible to make reasonably reliable predictions of the effects of the transfers. But there are other recipient areas where these conditions are not present and where there is likely to remain a much larger element of unpredictability and risk.

One difficulty in foreseeing the impact of arms transfers is that such transfers, when compared to precipitating political forces and events, may have only a minor effect on the stability of a region. In the absence of these precipitating political factors, large quantities of arms may be shipped to an area without armed conflict occurring. When these factors are present, nations may wage prolonged and highly destructive wars with relatively simple weapons, without having received foreign supplies for years.

Another problem is that it has often been difficult to determine the conditions which are most conducive to establishing and preserving a conventional military balance. In this respect, nuclear deterrence theory may provide only limited guidance, and may indeed be misleading. While the tremendous perceived costs of nuclear retaliation may prevent a potential aggressor from launching a nuclear attack, the potential costs of conventional retaliation are considerably lower. It is hard to calculate the price a potential aggressor is willing to pay in order to achieve important goals--especially when that price is considerably lower than the risk of national suicide.

In addition, deterrence may not operate effectively against low-level conventional threats. Combatants with limited objectives, such as acquiring a disputed border area, have often resorted to force despite an overall military balance favoring their opponents. They may have reasoned that such a low-level provocation would not evoke their opponent's full retaliatory response and that their objective could therefore be achieved by concentrating their forces at the limited area of military contact. Even when objectives are not so limited, a potential combatant in an inferior military position may be willing to go to war because of an unfounded belief in its own superiority. Thus, the elan of the French soldier at the outset of World War I was such that actual deficiencies in French military capabilities were not fully perceived. Moreover, guerrilla warfare--because of the level of the threat, the problem of finding relevant targets for retaliation, and the nature of the insurgents' objectives--has usually been impossible to deter by acquiring additional conventional military hardware alone. Reducing the likelihood of insurgency has often required an overall improvement in the recipient government's performance, including its administrative abilities and economic and social programs as well as its military preparedness. The relative importance of these factors in preventing guerrilla warfare may vary from case to case. In some situations, a particular balance of forces may play a major role in discouraging the resort to violence. In others, the existing military balance may have a relatively small impact on whether armed conflict will occur. In these instances, determining in advance a balance of forces that will make the outbreak of hostilities less likely may often be difficult.

There is the further difficulty of foreseeing the long-term, as compared to the short-term, effects of arms transfers on regional stability. Even military balances which appear to be stable in the short term may be eroded over time as a result of changed circumstances such as shifting patterns of major power alignment, advances in weapons technologies, and the intensification of regional rivalries and political disputes. Therefore, in the long run, there is always the danger that weapons intended to reinforce the peace may ultimately contribute to greater instability and armed conflict.

On the other hand, however, the transfer of arms may provide a framework for long-term stability. As mentioned earlier, the supply of arms to some tense regions may decrease the incentive for the local parties to initiate hostilities. Over time, the strengthening of the regional military balance may convince potential adversaries that it would be futile to attempt to alter the status quo through force of arms. The recognition of the futility of armed conflict might eventually lead to an increased willingness to resolve outstanding differences by peaceful means.

CHAPTER V

IMPACT OF CONVENTIONAL ARMS TRANSFERS ON THE ECONOMIES OF SUPPLYING AND RECIPIENT COUNTRIES

Although conventional arms transfers have been a relatively small element in the overall economic activity of supplier and recipient states alike, the perceived favorable and adverse economic effects of arms transfers have been important enough to supplier and recipient governments to merit their close attention and active participation in the international arms trade. It should be recognized, however, that economic considerations are only one of several factors which influence the arms transfer policies of governments. Even though economic concerns are gaining in importance, particularly for some supplier governments, these concerns may often play a minor role compared to the political and military motivations of supplier and recipient states.[1] In the case of the U.S., political and military motivations are the principal elements in arms transfer decisions.

The economic impact of conventional arms transfers is a question which cannot be treated conclusively and comprehensively on the basis of present knowledge. Although several of the short-term effects of the arms trade, especially for arms-producing states, have received considerable attention, some of the longer run aspects--such as the implications of weapons transfers for the rate of economic growth of supplier and recipient economies--need more systematic study before firm conclusions can be drawn. While it is currently possible to present a general framework for approaching the question of economic impact, a fuller picture of the economic effects of the arms trade must await more detailed analysis on a country-by-country basis.

SUPPLIER STATES

Compared to such aggregate measures of economic activity as gross national product, total exports, or even total military expenditures, the value of arms exports by the major weapons-producing states is rather small. In no case among the eight largest suppliers of conventional arms did the value of military exports in 1970 exceed 0.4 percent of GNP, and the average for the eight countries was close to 0.2 percent of GNP. In no case was the value of military exports for 1970 equivalent to more than six to seven percent of the total military expenditures of those eight countries--and here the average value was about 3.6 percent for these suppliers. With regard to international trade, the value of arms deliveries to other countries in 1970 was in almost all instances less than 10 percent of total exports, with an average figure for the eight countries of around 5.0 percent.[1]

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[1] See chapter III for a discussion of the politico-military objectives.

However, these comparisons may present a somewhat misleading picture of the impact of arms transfers on the economies of certain supplier countries and of the importance placed on arms sales by those countries. Although the magnitudes of military exports have in most cases been relatively limited, their impact on key industries, on individual geographic regions within the supplier country, and on other specific economic concerns of supplier governments has often been quite significant. The impact of the exports on the national economy generally is also not to be dismissed altogether.

While serving several of the economic interests of supplier governments, arms exports have also been associated with a number of economic costs to these governments. As will be shown below, adverse economic effects may result from the provision of arms on terms below costs to the suppliers themselves, increasing dependence on fluctuating levels of external demand for arms, and the diversion of resources from capital formation to the arms export industry. Some of these disadvantages may become noticeable only in the long run, whereas the economic advantages of arms exports frequently become apparent in the shorter term. The costs or disadvantages to supplier governments seem to be less marked and significant, at least in the short run, than in the case of recipient countries.

In assessing the economic effects of arms exports, it is important to make the distinction between the impact of arms exports on defense plants or industries and the impact on supplier governments, a distinction which applies in varying degrees depending on the extent to which the defense industry is privately owned.

The Impact on the Defense Industry

By taking advantage of such economies of scale as exist in the development and production of modern weapons systems, defense plants, like many manufacturers producing costly civilian items, achieve lower unit costs and maintain stable levels of employment. With regard to this first effect, the lowering of unit costs has become extremely desirable because of the increasing complexity and resulting high costs of designing and producing modern weapons. The introduction of advanced and unproven technologies and experiments with new production methods and special materials contribute to notably high pre-production costs. Hence, pre-production costs--including the cost of establishing the assembly line as well as research and development (R&D) expenditure--account for an increasingly large share of the total development and production costs of the weapons system.

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[1] Sources for these data: for arms exports, Annex A, Table I of this report; for total exports, United Nations Monthly Bulletin of Statistics, December 1972, Table 52 and Dept. of Commerce, Survey of Current Business, July 1972; for total military expenditure and GNP, ACDA, World Military Expenditures, 1971, Table II.

By increasing the number of weapons produced at a given plant, these high initial costs can be spread over a larger number of units, thereby reducing the average cost per weapon. In addition, as production runs are lengthened and plant managers and engineers become more familiar with materials and techniques, the productive efficiency of the plant may improve, further lowering the average cost of producing each weapon. Thus, there are strong economic incentives for increasing weapons production runs.

The pressures on defense industries to promote arms exports vary, depending to a large extent on the volume of domestic military requirements in individual countries. Where domestic weapons demands alone are insufficient to permit development and production on an economically desirable scale, arms exports may be regarded as the most advantageous means of increasing output and lowering average costs. The defense firms in France and the U.K., in particular, have looked to exports as means of ensuring increased production. According to private studies, France currently exports close to 30 percent of all defense production, while the French aerospace industry exports over half of its military aircraft production.[1] Where domestic weapons demands are large, such as in the U.S. and Soviet Union, exports are less essential as a means of ensuring economical production runs. However, even in the U.S. and USSR the rising cost of modern weapons production in recent years has made it increasingly important to seek lower average costs through arms exports. In the case of the U.S., sizeable cutbacks in defense procurement have created an additional reason for seeking lower costs.

It should be noted that the economic incentives to expand production for export vary from weapons system to weapons system. In general, the higher the design and other initial production costs and the smaller the number of units required to meet domestic military needs, the stronger will be the economic pressures for export. In the case of advanced jet aircraft, which are highly expensive to manufacture but are generally needed in smaller numbers than other weapons systems, the pressures for expanding output and recovering costs through export sales may be great. For small arms and other ground combat equipment, which require comparatively low R&D expenditure and which are often needed in large quantities by military forces, domestic demand alone may make production economically feasible, even for countries with relatively small military requirements.

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[1] See Stockholm International Peace Research Institute, The Arms Trade with the Third World, Stockholm, Almqvist and Wiksell, 1971, p. 257.

The second effect of increasing the volume of arms production--minimizing the adverse effects of uneven patterns of domestic weapons procurement demands--has frequently been just as important for the defense industry as lowering the average cost of each weapon produced. In order to make sure that the armed forces have in their inventories the most advanced weapons systems currently available, the governments of arms-producing states may insist that plant capacity and rates of production be increased so that orders can be filled in a relatively short time period. The problem with accelerating production in this manner is that the government may not place orders for a follow-on type of weapons system until several years after deliveries of the original system have been completed. During this period of "excess capacity" between the completion of deliveries and new orders, the plant's machinery and manpower may remain idle. Either these unproductive resources will be kept in being at a considerable cost or laborers will be laid off and the plant dismantled.

The lengthening of production runs in order to provide for the export market has the effect of keeping human and material resources as fully occupied as possible. In countries where domestic military demands are large, however, surplus capacity may be a smaller problem for the defense industry than in countries where domestic requirements are small.

The Impact on Supplier Governments

The defense industry's ability to achieve economies of scale by increasing weapons production for the external market has had important implications for the defense programs of supplier governments. The lowering of unit costs has frequently enabled supplier governments to procure weapons for their own armed forces at a lower price. Without an export market to promote expanded production, the expense of procuring arms for the nation's own military needs could in some cases be so high as to rule out an indigenous arms industry altogether--or at least to reduce the number of separate types of weapons systems that could be designed and produced indigenously. The French Government, which asserts that a national arms industry is an essential component of an independent foreign policy, has stated on several occasions that arms exports are a necessary means of insuring the economic viability of the French defense industry. Hugues de l'Estoile, International Affairs Director of the Delegation Ministerielle pour l'Armement of France, made this point in 1970: "It is necessary to maintain our national arms industry. In order to prevent that from being too great a burden on the defense budget and in order to make it an economically viable operation, we have to produce in quantities exceeding strictly domestic demand. That is what motivates us to export." During a 1972 debate concerning arms export policy in the Swiss National Council, supporters of the government position argued that Swiss neutrality was linked to an indigenous arms production capability and that Switzerland's arms industry could not subsist without foreign orders.

Expanding production for the export market can have the effect of increasing employment in geographic regions where defense plants are located. It has been claimed that governments of arms exporting states have at times awarded contracts on the basis of the need to stimulate economic activity in depressed regions.[1] If there is unemployment nationally, the exports may have a "multiplier" effect in buoying up economic activity, for the increment in national income due to the exports may significantly exceed their magnitude. While economic activity may also be stimulated by means other than promoting arms exports, governments of market economies may sometimes find it difficult to provide such stimulation.

In addition, by filling surplus plant capacity, military exports have contributed to the supplier government objective of insuring that a talented pool of specialized manpower remains productively employed. Governments frequently regard the steady employment of defense industry scientists and engineers as a valuable national asset--as a means of guaranteeing continual progress in defense technology and as a measure of insurance in case of national emergency. Because an organized pool of skilled labor may be costly to reassemble once it has been disbanded, keeping the defense plants active has sometimes been given a high priority. Maintaining a ready production capability is particularly important where there are large start-up costs, requirements for special technical capabilities, and long lead times.

Another economic effect has been the role played by military exports in improving a supplier country's balance-of-payments position. Compared to the volume of an arms-producing country's total trade, the value of military exports may appear small. But compared to the size of a country's deficit in the balance of payments, it may seem quite significant. As a result, the promotion of exports may be regarded as a valuable tool for correcting a payments imbalance. The arms transfer policies of such major suppliers as the U.S., the U.K., and France have all at times been influenced by balance-of-payments considerations. For example, these considerations have figured prominently in U.S. efforts to offset the costs of stationing troops in Europe by arms sales to the Federal Republic of Germany.

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[1] For examples, see John Stanley and Maurice Pearton, The International Trade in Arms, Praeger, 1972.

In the case of military equipment no longer required by the armed forces of supplier states, the export market may enable the supplier government to improve its balance-of-payments position as well as to recoup a portion of the initial purchase price of the equipment.

It is true that increased exports of civilian goods would have the same beneficial effect on balance-of-payments deficits as military exports. However, because many supplier governments have explicit control over the level and types of military exports and only limited influence over many other types of international financial transactions which enter the balance of payments, they may consider arms sales one of the more convenient vehicles for reducing a deficit and therefore play a more active role in promoting arms exports.

Adverse economic effects have also been associated with the manufacture and supply of conventional arms. First, arms have often been made available to recipients on a grant, concessionary credit, or discount basis, each of which represents to a greater or lesser extent a drain on the supplier government's resources--although there may nevertheless be a beneficial effect on the country's defense industry. The Soviet Union and the U.S. are the two governments which have most often supplied arms on terms below costs to themselves. It should be recognized, however, that a sizeable share of the weapons provided on a grant or discount basis has been surplus or used equipment and therefore has meant somewhat less of a drain on the supplier's resources.

Not only has the practice of discounting been an important part of the Soviet arms supply program, but several of the Soviet Union's arms recipients have continued to postpone payments of debts incurred through weapons purchases. The Soviet Union's export earnings on arms supplies to North Vietnam, Egypt, and Indonesia--three of the largest recipients of Soviet arms in the developing world--have been meager. Soviet shipments to North Vietnam have taken the form of grant aid, while Egyptian and Indonesian debts have either been indefinitely postponed or rescheduled. Only a small fraction of the arms debts that were owed to the Soviet Union has been repaid. In the U.S., although grant aid had been the major element in the transfer program in the immediate post-World War II period, the emphasis in the program has shifted from grants to credits and cash sales as U.S. friends and allies have become better able to shoulder the economic burden of their own defense. In recent years grant aid has been limited to selected developing countries.

A second adverse effect of arms exports is the dependence on fluctuating and unpredictable levels of external demand. While it is true that surplus plant capacity has been absorbed and employment in depressed regions has been raised by export orders, these benefits can be retained only by maintaining a consistently high level of exports. Because of the geographic concentration of defense industries, a sharp drop in foreign orders may result in severe hardships for certain regions. Declining exports may also increase the burden on supplier states of providing for their own defense needs. In some countries, costly research and development programs for new weapons systems are begun only if, in addition to meeting local military requirements, the system is believed to have sufficient export potential.

Arms export levels have fluctuated for several reasons. Sometimes the supplier government itself has barred sales for political reasons. Thus, the French arms embargo to countries directly involved in the 1967 Arab-Israeli war led to a short-term decline of close to 35 percent in French military sales. Exports may also drop in response to general shifts in recipients' political orientations, to a rival supplier's introduction on the foreign market of a new and desirable weapons system, and to a rival's vigorous export promotion campaign.

There is a risk that in order to maintain a share of an increasingly competitive market, suppliers will have to keep designing and producing ever more advanced weapons systems at an accelerated rate--an undertaking which could become extremely expensive. There is a further danger that, faced with the possibility of falling export orders, politico-military reasons for arms supply restraint may be outweighed by economic pressures to expand exports.

As we see from the above, it is possible to identify certain favorable and adverse economic effects of arms transfers. The question of the impact of arms exports on economic growth, however, is considerably more complicated. It is even more difficult to assess than the relationship between economic growth and military spending in general--a relationship which may be influenced only to a small degree by arms exports.

On this broader question--the effects of military spending on economic growth--there is some disagreement. It can be argued that many of the technological advances which result from weapons production have had important "spin-off" effects on the civilian sector and have therefore contributed to an increase in the overall productive capacity of the economy. It is held that strong government support for military R&D has meant that new technologies, materials, and management techniques have been introduced and tested within the military sector--and subsequently transferred to the civilian sector--sooner than would otherwise have been possible.

On the other hand, it can be claimed that defense spending has sometimes led to the absorption of a disproportionate share of the supplier country's research and development funds, engineers, and scientists, diverting them from potentially more productive activities in the civilian sector. It has been stated, for example, that the relatively high ratio of military spending to GNP in the United States and the Soviet Union during the 1950's and 1960's reduced the amount of saving, investment, and capital formation that would otherwise have taken place in these countries, and therefore their long-term economic growth rates. Conversely, the relatively low military spending/GNP ratios that obtained in West Germany and Japan during that period were a material factor in their rapid economic growth.

The extent to which arms export programs have affected the long-term growth potential of supplier states--either by increasing the favorable growth effects of military spending or by intensifying the misallocation of resources--may vary from country to country. In supplier states where domestic military requirements are large, arms exports usually have little bearing on the number of different types of weapons which are designed and produced--and therefore on the level and diversity of R&D projects. The impact of arms exports on society's allocation of resources, and hence on long-term economic growth, is relatively small. In countries where exports constitute a larger share of total defense production, the impact of those exports on resource allocation and on the number of separate R&D projects which can be undertaken may be much greater. The effects on long-term economic growth--

whether favorable or unfavorable--will be proportionately greater. But measuring the direction and magnitude of these effects is exceedingly difficult.

What is somewhat easier to assess are the effects of arms exports on economic growth given a supplier government's decision to produce a certain quantity and mix of weapons for its own military requirements. Given that decision, the net effect of an arms exporting program on economic growth depends upon two factors: (1) whether the supplier government sells the arms at their average cost of production, gives them away, or sells them at less than their average cost of production, and (2) whether or not economies of scale can be realized by producing more arms for export.

In those cases where the supplier country sells the arms at no less than average cost of production and realizes economies of scale from producing them, then the export sale serves to reduce the average unit cost of the arms the supplying country produces for its own use. Thus, domestic resources that would otherwise be devoted to military uses can be released for civilian uses, including saving, investment, and capital formation. When obsolete arms are exported--even on a grant basis--the costs of maintaining or scrapping the equipment can be eliminated, thereby freeing resources for other uses. In these various situations, economic growth can be stimulated by the act of arms exportation.

In those cases where the supplying country gives away the arms to a recipient country and realizes no economies of scale from producing them, it is clear that the act of arms exportation creates an additional claim on the resources of the supplying country, leaving fewer resources for use in capital formation. Under such circumstances, economic growth is dampened by the act of arms exportation.

In intermediate cases, there is a combination of subsidies to arms exports--which *per se* cause a drain on the supplying country's resources--and of economies of scale in production--which *per se* tend to augment the supplying country's domestic resources. The *net* effect of arms exports on the growth of the supplying country depends upon which of the two factors is stronger.

Alternatives to Exporting Arms

It should be noted that defense industries in a number of countries with relatively low domestic weapons demands have been able to lower unit costs and reduce surplus capacity without having to export. One method of lowering unit costs has been to design and produce multi-purpose weapons, thus reducing the military need for several different weapons types. In this manner, the number of separate R&D efforts is reduced and the quantity of the weapons system required--because it must perform several functions--increases. The Swedish Air Force, for example, has relied heavily on multi-role combat aircraft, but many other states--particularly those facing a wider range of military threats--have rejected this option in favor of the perceived military advantages of having separate weapons types for different combat situations.

Another approach has been to cooperate with other arms-producing states in the design, development, and production of a common weapons requirement.[1] Because development costs are shared and the market for the product enlarged, the burden on individual states is decreased. Although international collaboration in arms development and production has so far been limited and the results of such ventures have been mixed, greater cooperative efforts in th future could, if more successful than some previous projects, redu the economic pressures to export arms to third countries.

In addition, a practice that is becoming more widespread is the production of foreign-designed weapons under license, which involves the sale and transfer of technical information and production know-how, rather than the weapons themselves. Although the producer must purchase this information, the price is considerably lower than the R&D costs that would otherwise be necessary. Without the full R&D burden to recoup, the pressures to export are somewhat decreased, although certainly not eliminated.

Some states have been able to reduce surplus capacity without resorting to exports. By limiting plant capacities and slowing the rate of deliveries, Swedish arms manufacturers have often managed to avoid excess capacity. In Sweden, the U.K., and the Federal Republic of Germany, it has sometimes been possible during periods of low military demand to convert productive facilities for the manufacture of products for the civilian sector. Because of the difficulties of adapting specialized manpower and machinery to civilian production, however, the success of this practice has been limited. A more common practice is for firms which are active in defense production to develop an additional capability for civilian production. In this manner, losses caused by slack military demand may be at least partially offset by profits in the civilian sector.

These methods of lowering unit costs and reducing surplus capacity--export, multi-role systems, co-production, licensing, adjusting government weapons procurement to the production cycle, civilian and military product alternation and industry diversification--are not mutually exclusive. The defense industries and governments of arms-producing states have sometimes used a combination of them in order to make defense production as economic as possible.

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[1] Examples of co-development and co-production include the Anglo-French Jaguar aircraft and the British, Italian, and German multi-role combat aircraft (MRCA).

RECIPIENT STATES

For most arms recipients the value (as defined in Chapter I of this report) of their foreign arms trade compared to gross economic indicators is somewhat greater than in the case of supplier countries. In general, however, their military imports are still relatively small. In 1971, for example, the value of arms imports for the developing countries was close to 15 percent of the value of military expenditures and less than one percent of the value of total developing world GNP. For the late 1960's, it has been estimated that military imports were equal to approximately six percent of the total imports of developing states.

These developing world totals conceal a considerable amount of variation among developing states. For the leading recipients of conventional arms--many of which have been involved in interstate or internal conflicts--the values may be much higher. For the 16 developing countries which, during the 1961-1971 period, were the largest recipients of conventional arms, the total value of arms imports in 1970 was equivalent to almost 33 percent of the combined military expenditures of the 16 countries, 2.2 percent of their combined GNP's and about 12 percent of their combined total imports. It should be pointed out, however, that most of these 16 recipients received large quantities of arms on a grant or discounted basis, thus offsetting to some degree the large economic impacts suggested by these ratios.

The relative values of military imports for the developed country recipients were generally lower than for the developing country recipients. In most cases, this can be attributed to the considerably larger GNP's and military establishments of developed countries as well as to the fact that many of these countries are capable of producing their own weapons and need not rely so heavily on imports. Less than one percent of the military expenditures of these countries went to military imports, while arms imports were equivalent to less than .06 percent of GNP.[1]

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[1] Sources: for arms imports, Annex A, Table II of this report; for developing world imports, SIPRI The Arms Trade with the Third World, p. 84; for major recipient imports U.N. Monthly Bulletin of Statistics, Dec. 1972, for GNP and military expenditures, ACDA World Military Expenditures: 1971, Table II.

As in the case of the impact of arms exports on supplier country economies, the relatively low levels of military imports, when compared to overall indicators of economic activity, often do not provide a complete picture of the economic effects of importing arms, especially for the developing country recipients. First, the value of the weapons themselves understates the effects on recipient economies of arms acquisitions. The additional human and material resources required to operate and maintain the imported weapons systems will have further economic implications for the recipient country. Moreover, providing the infrastructure to support these systems--such as airfields, communications facilities, and power stations--will also have an impact on recipient economies.

Secondly, even though military imports are equivalent to only a small part of GNP in most cases, they may often compete directly with resources necessary to promote economic development Given the need for capital and foreign exchange in developing countries, even a small diversion of those resources by military imports--or, alternatively, the freeing of resources by grant military aid--may be significant.

Arms imports may have positive or negative effects on the economies of recipient states. On the one hand, foreign arms acquisitions can make available to the civilian economy a greater quantity and quality of resources, both human and material, than would otherwise be possible. In such cases, arms imports may spee the rate of economic development. On the other hand, despite the contribution of arms imports to national defense, the acquisition of foreign arms can divert resources from civilian uses that may b more productive. Thus, instead of importing capital equipment whi would raise the productive capacity of the economy, recipients may use foreign exchange and other resources to procure and support weapons systems which generally do not contribute to society's ability to generate additional national income.

Whether arms acquisitions will have favorable or adverse effects on recipient economies depends on several factors, including (1) the types and numbers of weapons and military equipment acquired, (2) the degree to which the importation of this hardware requires the recipient country to increase spending on manpower, maintenance, and other complementary military functions, (3) the applicability of military training, equipment, and infrastructure to civilian uses, (4) the terms of the arms transfers, and (5) the manner in which resources allocated to existing arms import programs would be used in the absence of those programs.

The more expensive the weapons imports, the greater is the diversion of the recipient country's resources from other possible uses. For certain systems--especially such weapons as jet combat aircraft--the large number of technicians required full time to perform maintenance and repair functions may reduce a country's supply of skilled manpower for civilian purposes. Moreover, advanced systems are more likely to require the diversion of additional foreign exchange or capital resources in order to establish the necessary infrastructure support. It should be pointed out that for developed country recipients--with existing transportation, communications, and power networks as well as large pools of skilled manpower--the necessity to provide additional infrastructure may often be avoided, and the diversion of skilled manpower is less likely to create shortages in the civilian sector.

The support services and infrastructure which are often required in conjunction with arms acquisitions may, despite their added expense, bring significant economic benefits. For example, training local manpower to operate and maintain foreign-produced weapons may provide those personnel with technical and management skills which can be transferred to civilian occupations, with a resulting increase in the productivity of the civilian labor force. In general, the more specialized the military training, the smaller will be the civilian "spin-off." Thus, learning how to build a bridge or drive a truck may have considerable civilian utility, while learning how to fire a surface-to-air missile may only have limited applicability to the civilian economy.

In addition, the infrastructure created in conjunction with weapons acquisitions may have civilian as well as military uses. This applies especially to such projects as airfields, air traffic control systems, roads, port facilities, communications networks, and air-sea rescue facilities. Sometimes these projects have stimulated economic development in previously unsettled areas within the recipient country. Because some governments, especially those facing serious security threats, find it easier to secure funds for military than civilian programs, many of these valuable projects might not be undertaken in the absence of arms imports. In such cases--where civilian infrastructure investment would not otherwise occur--military imports have a favorable effect on the growth rate.

The terms of transfer have an extremely important bearing on the economic effects of arms acquisitions. If the transfer is made on a grant basis, recipient country resources which might otherwise go to arms purchases are free to be channeled into more productive uses in the civilian sector. Thus, grant military assistance may actually stimulate economic development by preventing a diversion of domestic resources to the military sector. The lower the proportion of the full price of the weapons that recipients are required to pay--whether reductions in price result from favorable credit terms, discounting, or grant aid--the lesser will be the adverse effects on economic growth. If the supplier agrees to accept local currencies or goods as payment for the arms, the adverse effects may also be reduced. Moreover, in some cases, the additional costs of infrastructure, operation, and maintenance as well as the expenses of training local military personnel and technicians are borne, partially or entirely, by the supplier government.

In assessing the economic effects of military acquisitions, it is also important to know how the resources allocated to imports would be employed in the absence of existing arms import programs. In some cases, especially where perceived security threats are high, military spending might well increase if existing arms acquisition programs were discontinued. Thus, confronted with a suspension of grant assistance, a recipient might choose to acquire arms on a sales basis, diverting additional resources from the civilian sector. An arms purchaser faced with a discontinuance of imports from one supplier might, given its perception of military needs, decide to embark on domestic arms production which may be uneconomical or to purchase arms at greater expense from another supplier, rather than channel resources previously allocated to arms procurement into civilian investment. In such instances--where the absence of existing arms import programs, whether grant or sales, would mean an increase in military spending--the existing import programs may have a favorable effect on economic growth by preventing a further diversion of resources from development to defense.

On the other hand, a recipient not faced with pressing military needs--or domestic political pressures for arms procurement--might, in the absence of arms imports, decide to reduce military spending and assign additional resources to the civilian sector. In such a situation, existing arms imports would retard development by diverting resources from the civilian to the military sector.

However, even in those cases where resources would otherwise be assigned to the civilian sector, it is unlikely that all of the resources previously earmarked for arms acquisitions would simply be channeled into productive civilian investment projects. More likely, these civilian investment projects would have to share some of the released resources with private and government consumption as well as with types of civilian investment which have limited growth effects, such as consumer durables.

The degree to which cuts in arms imports would actually lead to higher investment rates depends on such factors as the priority given by the government to the investment program and growth, the strength of pressures for higher consumption, and the availability of foreign exchange. Because these factors are often difficult to predict, one can usually only speculate on the alternative uses of the resources currently being allotted to arms imports, and therefore any precise measurement of the adverse effects of arms imports on the growth rate becomes impossible.

As seen from the foregoing, factors which may contribute to a favorable effect on economic growth include (1) arms acquisitions on a grant or concessionary basis, (2) imports which do not require large additional expenditures on support services or infrastructure, (3) military training and infrastructure projects which have beneficial spillover effects on the civilian sector, and (4) a recipient government's inclination to increase military spending in the absence of existing arms import programs.

Among the factors which may contribute to an adverse effect on economic development are: (1) the acquisition of arms, particularly large quantities of expensive systems, at full price or with relatively small discounts, (2) an increase in spending on support services and infrastructure, (3) training and infrastructure programs which have little civilian utility, and (4) a recipient government's willingness to increase civilian capital formation in the absence of existing arms import programs.

In the case of individual arms recipients, a mix of these positive and negative factors may be found. Whether the net effects of arms imports on a recipient country's economic development are positive or negative depends on the nature of that mix and the relative weights of the various factors. Although some of these factors can be measured with reasonable accuracy, others are less subject to reliable quantification, particularly those requiring that assumptions be made about the recipient's most likely behavior in the absence of existing acquisition programs. Hence, further systematic study of individual cases is necessary--particularly of the more subjective variables--before conclusions can be drawn with regard to the net effects of arms imports on recipient economies.

A few economists have done detailed studies of individual recipient economies. Professor Neil Jacoby constructed a number of models of the Republic of China's development over the period 1952-1965 upon several sets of assumptions--no military burden, military burden with economic and military aid, and military burden without any external aid. He estimated that, without any military burden, the ROC's real GNP would have grown 9.7 percent a year, or 2.1 percent per year faster than its actual annual growth rate of 7.6 percent. Thus, the military burden dampened the growth rate, by diverting manpower and foreign exchange from capital formation to military uses. But the central question is what the ROC would have done in the absence of the MAP. He concluded that, given the fixed purpose of the ROC to defend itself against perceived threats, it would have spent more of its limited resources to make or buy arms elsewhere, had not the U.S. MAP been available. Given these circumstances, the effect of the MAP was to increase the rate of the ROC's economic development.[1]

Dr. Charles Wolf has stated that security assistance has had a beneficial impact on the economies of the Republic of China, the Republic of Korea, and Thailand. However, lower levels of military assistance to both India and Pakistan during the 1960's would have meant that "competition for constrained resources within those two countries would have been altered in such a way that defense programs probably would have been smaller, development efforts larger, and the countries' rates of economic growth probably higher." Similarly, he maintained that if Soviet military assistance to Cuba had been significantly lower, the economic record of that country would have improved.[2]

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[1] Neil H. Jacoby, U.S. Aid to Taiwan: A Study of Foreign Aid, Self-Help, and Development, New York, 1966.

[2] Statement before the Joint Economic Committee, Subcommittee on Economy in Government, Hearings on Economic Issues in Military Assistance, February 2, 1971.

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CHANGING PERSPECTIVES ON U.S. ARMS TRANSFER POLICY

REPORT

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INTRODUCTION

President Reagan recently announced a fundamental shift from a U.S. arms transfer policy that emphasized the dangers of international arms traffic to a policy that emphasizes the benefits of transferring arms to America's friends and allies. On the surface, the policy statements indicate a dramatic change from constraint to promotion, but the actual change in the export of U.S. weapons may be less distinct. Since the 1930s, U.S. arms transfers have been controversial and a change in policy will have many ramifications.

-- Arms transfers will probably enhance the military capabilities of recipient nations, but there are often questions as to a particular country's need for particular military equipment and as to its ability to operate, maintain,and secure the equipment.

-- Arms transfers may enhance a client's ability to deter or repel aggression thereby enhancing regional stability; or the arms transfers may stimulate an arms race, increase the level of destruction in the event of war, enable a client to conduct offensive operations, or even provoke a neighboring state to conduct a preemptive attack on the U.S. client.

-- The weapons transfers may be necessary for the client state to establish a sufficient sense of security to attract investments and build a solid economy. On the other hand, the cost of purchasing, maintaining, and operating new weapons may place an unacceptable strain on the country's economy and prevent economic and social development.

— The transfer of U.S. weapons to friendly countries in remote areas may enhance the ability of U.S. Armed Forces to conduct joint operations with those countries in large scale conflicts. However, transfers to other nations may compete with the weapons and equipment requirements of U.S. forces.

-- Friendly relations with a client state may be enhanced by selling or giving it the weapons its leaders desire, but American relations with neighboring nations may be equally degraded. The net effect could be either a gain or a loss of U.S. influence in the region.

— Arms transfers may have a beneficial effect on the U.S. military industrial base and employment; extensive arms sales may improve the U.S. balance of payments position. However, concessional sales and grants may increase inflation, and some argue that the potential economic benefits are small and should not play a dominant role in arms transfer decisions.

Recent debate has focused on several controversial proposed arms sales and has brought into question the benefits and risks of the policy changes for world peace, U.S. national security, U.S. influence in the Third World, and U.S. economic well-being.

This study discusses past U.S. policies regarding the transfer of arms, ammunition, and the implements of war and analyzes the recently imposed policy changes and their implications. It also examines the controversial circumstances involving three possible arms clients of the near future: Venezuela, Pakistan, and the People's Republic of China.

I. BACKGROUND OF U.S. ARMS TRANSFER POLICIES

Concern for the national security of the United States has been the primary rationale for Government controls on arms exports as well as the primary justification for the U.S. Government's authority to sell, give, or loan arms to other nations. For many years the United States has blocked the transfer of arms, amunition, and the implements of war to its enemies and to other nations that might threaten world peace. As early as the Civil War years, the United States also restricted exports of scarce materials it needed for its war efforts.

In 1935, after several years of debate, Congress established a formal system for regulating arms transfers that can be traced forward to today's laws and regulations. During World War II and the cold war the United States formed a policy faciliting the transfer of arms to allies and other friendly nations in order to deter or repel aggression that would threaten U.S. interests. Under its strategy of containment, the United States worked to build the military strength of its friends and allies, established mutual security alliances, and deployed air, naval, and ground forces around the periphery of Europe and Asia.

In the mid-1960s, after India and Pakistan fought each other with U.S.-made weapons; after a U.S. military assistance program in Southeast Asia was transformed into a U.S. war, and then a U.S. defeat; and as the U.S. economy slowed and strained, several Congressmen began emphasizing the costs and dangers of U.S. arms transfers.

As many of America's friends and allies achieved economic strength, U.S. arms transfers shifted from grants to sales. In 1968 Congress passed the Foreign Military Sales Act, and in 1969 President Nixon declared the doctrine that while the United States would keep its treaty commitments, would provide its allies a shield against nuclear threats, and would help develop allied strength through military and economic assistance, "we shall look to the nation directly threatened to assume the primary responsibility of providing the manpower for its defense." These legislative and executive policies firmly established government-to-government arms sales as a means of building free world security.

However, in the following years, the effectiveness of arms sales in preserving peace and securing U.S. national interests was questioned more frequently. In 1971 Congress expressed its sense that the President should: immediately institute a comprehensive review of military assistance and sales programs; initiate arms trade control talks with the Soviet Union, Great Britain, France, Germany, and Italy; commence a debate in the United Nations on the arms trade; and "use the power and prestige of his office to signify the intention of the United States to work actively with all nations to check and control the international sales and distribution of conventional weapons of death and destruction."

Also during this period America added foreign policy considerations to its determination of which arms transfers would be allowed and which prohibited. The United States adopted a basic policy of denying arms sales of sophisticated weapons to countries that need their financial resources for economic development and do not have a serious threat to their security. Some Members of Congress argued that sales to countries that are not threatened were not only a waste of the country's resources, but an invitation to a regional arms race and a blow to world stability and peace. In the late 1960s and early 1970s Congress reflected public disapproval of the authoritarian repression and corruption witnessed in such military aid recipients as Vietnam, Greece, Korea, and the Philippines.

Congress gradually passed legislation prohibiting security assistance to governments which engage in a consistent pattern of gross violations of internationally recognized human rights. For instance, in 1968 the Foreign Military Sales Act prohibited arms sales to dictators who denied social progress in their countries. Congress adopted this provision to encourage governments to observe more closely the human rights of their citizens, to make it clear that the United States does not condone such repression, and to avoid the use of American-made weapons for the repression of peoples it means to help.

The United States has also tried to influence the policies of foreign governments by requiring the recipient to agree to use the weapons only for purposes of legitimate self-defense, by withholding the quantities of spare parts and ammunition that would be required for sustained combat, and by training and advising the recipients on the proper use of the weapons.

Beyond these national security and foreign policy considerations, arms sales have been driven by the demands of the market system. Foreign governments and other organizations are anxious to obtain military equipment; American industries want to complete sales to increase their profits; labor organizations desire the resulting jobs; some economists point to the benefits to the U.S. balance of payments position; and the U.S. Armed Forces seek ways to reduce the unit costs of weapons so that they can obtain more of them. Many of these parties argue that the United States should seize the economic advantages of potential arms sales rather than sacrifice them to another country.

These contending national security, foreign policy, and economic interests have climbed and fallen in importance as the Congress, sucessive administrations, industry, and private interest groups have shaped U.S. arms sales policies. In the mid-1970s these groups joined in a major debate and revamped U.S. policy.

II. ARMS TRANSFER POLICIES IN THE 1970'S

A. Congressional Initiatives in the Mid-1970s and the Arms Export Control Act

Congressional initiatives of the early 1970s to institute more effective controls over U.S. arms sales culminated in 1976 with passage of the International Security Assistance and Arms Export Control Act. Following a general post-Vietnam trend, Congress took a more active role in foreign policy matters in general, and particularly focused on policy areas that had become primary tools of U.S. relations abroad. By January 1977 when the Carter Administration came into office, Congress had established a firm record of supporting restraints and controls on U.S. arms transfers.

The 1976 measure, characterized by the Senate Foreign Relations Committee as the "most significant piece of legislation in the field of foreign military assistance policy since the enactment of the Mutual Security Act more than a quarter of a century ago," shifted the emphasis of arms export policy from selling arms to controlling the sales of these weapons. As increasing numbers in Congress became alarmed over the rapid growth of American arms sales, key members and committees tried in 1973, 1974, and finally, 1976 to place restraints on government and commercial exports of arms and to provide more coherent congressional guidance in the development of a comprehensive arms sales policy.

Among the most significant congressional initiatives in this area was adoption of a provision permitting Congress to disapprove a major arms sale. First proposed by Senator Nelson in 1973, this legislative veto of proposed government-to-government arms sales over $25 million was made part of the Foreign Assistance Act of 1974 over strong objections by the executive branch. It was further strengthened in 1976 despite an initial veto by President Ford who felt such provisions violate the constitutional separation of executive and legislative powers. While Congress did remove other legislative vetos from the bill following the presidential veto, it retained its right to reject a major arms transaction.

Congress also tried to place similar controls on commercial arms sales. It had not substantially modified legislation pertaining to non-government exports since 1954, and many felt it was time to insert policy guidance and some congressional oversight into the statute. The Senate, under the leadership of Senator Fulbright, had tried in 1973 and 1974 to reduce the role of the U.S. Government in arms transfers and return these sales to commercial channels, but the 1976 legislation reversed this trend by forcing major weapons tranfers to proceed on a government-to-government basis. Supporters of governmental involvement felt it would further tighten controls over the flow of conventional arms. The 1976 bill placed a $25 million limit on the size of any commercial arms export license, but failed to enact a means for congressional rejection of large commercial sales when President Ford vetoed the original measure.

Another significant congressional initiative was a push for the United States and other arms suppliers to enter into negotiations to reduce and control international arms traffic. The Foreign Assistance Act of 1974 included a "sense of Congress" that the growth in the international transfer of arms to developing nations was a cause for grave concern. Building on a theme from earlier legislation, it urged the President to seek international cooperation in limiting arms transfers through the Geneva Conference of the Committee on Disarmament. In 1975 the Senate Appropriations Committee expressed its concern over what it called "the rapid escalation of U.S. arms transfers abroad that has taken place with inadequate consideration being given to the potentially destabilizing effects of such transfers." As a result, the committee instructed the Department of Defense and other appropriate agencies to report on the feasibility of conventional arms control agreements. The Arms Export Control Act (AECA) further established congressional intent in this area, saying it is the policy of the United States "to exert leadership in the world community to bring about arrangements for reducing the international trade in implements of war." This policy statement went on to express a "sense of the Congress" that the President should initiate multilateral discussions and call for an international conference to curb arms transfers.

An important part of congressional initiatives during this period focused on providing Congress and the public more information concerning U.S. arms transfers. It was argued that bringing these issues out in the open would provide Congress with the background necessary to participate in arms export decisions and would rebuild public confidence in arms sales policy. The 1976 legislation included several provisions intended to meet these concerns. The most comprehensive items were the addition of a new section to the Arms Export Control Act requiring an annual report describing and justifying the next year's arms transfer program and the expansion of a 1974-passed quarterly reporting requirement designed to keep Congress fully informed of the current status of U.S. arms exports. Other reports required by the AECA provide information concerning issuance of commercial export licenses for major weapons, possible violations of an arms sales agreement, proposed third country transfers of U.S. supplied weapons, and listing of agent fees paid or offered by U.S. defense contractors in order to win an overseas sale.

Congress was also successful in the mid-1970s in adding provisions which required the executive branch to consider associated foreign policy issues when making arms sales decisions. Concern over human rights violations in countries receiving U.S. foreign aid led Congress to adopt a measure in 1973 expressing a non-binding "sense" that the President should prohibit economic and military assistance to nations incarcerating individuals for policital purposes. This was strengthened in 1974 when another sense of the Congress was adopted that called for the reduction or termination of security aid to nations violating recognized human rights standards. Finally, in 1976, Congress imposed a binding requirement that security assistance, including arms transfers, would be terminated for any country engaging in human rights violations. The 1976 legislation required the Administration to consider several other issues before proceeding with foreign military aid and sales, including: nuclear transfers; acts of discrimination against U.S. nationals on the basis of race, religion, national origin, or sex; protection of terrorists by recipient nations; and impact of sales on U.S. combat readiness.

Although Congress gained a larger role in U.S. arms sales policy during this period, not all congressional initiatives survived President Ford's veto of the original 1976 legislation. Perhaps the most controversial item was the proposed ceiling on total U.S. arms sales. Originally proposed by the House Foreign Affairs Committee, this provision set a $9 billion annual ceiling on contracts for the sale of defense articles and defense services. The President contended that a self-imposed ceiling would actually impede U.S. efforts to gain international agreement for restraint on arms transfers and would cause individual requests for weapons to be weighed against other unrelated transactions rather than being judged on their own merits. Following the President's veto, Congress dropped the mandatory ceiling but expressed its "sense" that arms sales in any fiscal year should not exceed current levels. Congress also elected to remove from the bill several additional legislative veto provisions that had been the target of Administration objections. On matters such as human rights violations, commercial export license approval, violations of arms sales agreements, third country transfers of U.S. defense items, and nations harboring terrorists, the legislative vehicle (concurrent resolution) for disapproving action taken by the Administration was either dropped or changed to a joint resolution which would require the President's signature.

B. President Carter's Arms Transfer Policy

Key Provisions and Goals of the Carter Policy

On May 19, 1977, President Jimmy Carter announced a new United States policy to govern the transfer of conventional armaments to foreign nations. The Carter policy was, in important ways, a continuation and further development of congressional initiatives of the early 1970s. "Henceforth," said the President, the use of conventional arms transfers would be viewed as an "exceptional foreign policy implement, to be used only in instances where it can be clearly demonstrated that the transfer contributes to our national security interests." President Carter noted that the Administration would continue transferring arms to promote U.S. national security and that of "close friends," but that the burden of proof would be placed on those who favored a particular arms sale rather than on those who opposed it.

The Carter policy established a set of controls applicable to U.S. arms transfers to all nations except NATO members, Japan, Australia, and New Zealand. The Carter controls were to be binding on sales to non-exempted nations unless "extraordinary circumstances" necessitated a Presidential waiver of them or the President determined that "advanced weaponry" needed to be sold to nations friendly to the U.S. to "offset quantitative or other disadvantages in order to maintain a regional balance."

The Carter policy included a series of objectives by which the success of his approach to U.S. conventional arms transfers can be evaluated. The goals of President Carter's policy are summarized below.

— The dollar-volume of new commitments under the Foreign Military Sales and Military Assistance Programs for weapons and weapons-related items would be reduced in FY 1978 from the FY 1977 total. Sales of defense services and U.S. commercial arms transfers were excluded from this "ceiling," as were the value of arms transfers to the exempted states noted above.

— A reduction in the sale of sophisticated and costly U.S. weaponry was sought by systematizing the arms transfer review process and by imposing various qualitative restrictions on U.S. arms transfers, including guidelines forbidding:

a) First introduction into a region by the U.S. of a newly developed, advanced weapons system which could create a new or significantly higher combat capability.

b) Most major coproduction agreements with foreign governments, with restrictions on third-country-exports for those entered into.

c) Development or significant modification of advanced weapons systems solely for export.

d) Sale of newly developed, advanced weapons until they were operationally deployed with U.S. forces.

— The "burden of persuasion" would be placed on the proponents, not the opponents, of an arms sale.

— An attempt would be made to remove the incentive to promote foreign arms sales in order to serve the economic end of lowering unit costs for Defense Department procurement.

-- An effort would also be made to dampen arms sales promotion by expressly forbidding it by embassies and military representatives abroad, and by not permitting it by agents or private manufacturers unless they received prior authorization from the State Department.

- An attempt would be made to obtain actual reductions in the worldwide traffic in arms through multilateral cooperation with foreign arms suppliers.
- In formulating U.S. security assistance programs consistent with the arms transfer policy controls, an effort would be made to promote and advance respect for human rights in recipient countries. Furthermore, the economic impact of arms transfers to countries receiving economic assistance was to be considered.

The Carter Policy In Practice

With the provisions and goals of the Carter policy in mind, it is useful at this point to set out pertinent data and illustrations of President Carter's policy as it was actually applied. This data comes from various official U.S. sources, including but not limited to formal testimony of senior officials of the Carter Administration before Congressional committees.

Table 1 shows the annual current dollar value of arms transfer agreements with Third World countries by major arms suppliers from 1973 through 1980. As these data indicate, the value of U.S. arms sales agreements in nominal terms remained fairly constant through this period or, considering inflation, declined gradually. This is true even if the MASF account (Military Assistance Service Fund that supported Asian forces in the South East Asian war zone) is included for the pertinent years. The exclusion of terminated Iranian contracts also would not alter the validity of this basic generalization. U.S. arms transfer values in the Carter period (1977-1980) averaged about what they were in the previous four years under Presidents Nixon and Ford.

Table 1

ARMS TRANSFER AGREEMENTS WITH THE THIRD WORLD, BY SUPPLIER 1/
[In millions of current U.S. dollars]

	1973	1974	1975	1976	1977	1978	1979	1980
TOTAL------------	10,452	21,677	21,639	21,398	28,457	25,371	28,865	41,169
Non-Communist---------	6,742	14,777	17,299	13,713	17,957	21,521	18,665	25,069
Of which:								
2/ United States----	4,412	10,097	10,989	9,813	9,957	10,311	9,965	9,659
France-----------	500	2,100	2,320	1,035	3,170	2,725	4,310	7,935
United Kingdom---	1,000	760	1,320	600	1,400	3,570	1,260	830
West Germany-----	140	670	750	730	1,220	2,310	890	870
Italy------------	290	430	1,040	220	980	1,330	340	2,680
Other free world-	400	720	880	1,315	1,230	1,275	1,900	3,095
Communist-------------	3,710	6,900	4,340	7,685	10,500	3,850	10,200	16,100
Of which: U.S.S.R.---	3,320	5,970	3,680	6,520	9,610	2,910	8,800	14,920
Dollar inflation index(1973=100)--------	100	107	117	131	136	146	158	174

1/ U.S. data are for fiscal year given (and cover the period from July 1, 1972 through September 30, 1980). Foreign data are for the calendar year given. Statistics shown for foreign countries are based upon estimated selling prices. All prices given include the values of weapons, spare parts, construction, all associated services, military assistance and training programs. U.S. commercial sales contract values are excluded, as are values of the Military Assistance Service Funded account (MASF) which provided grant funding for South Vietnam, Laos, Philippines, Thailand, and South Korea. MASF for FY1973 was $7,320,000,000; for FY1974 $840,000,000; for FY1975 $544,000,000. Related grant transfers to South Korea and Thailand, also excluded, were $11,000,000 in FY1979 and $151,000,000 in FY1980. All data are current as of January 1, 1981, and reflects termination of all sales contracts other than Iran. The value of prior Iranian contracts cancelled primarily by the Khomeini regime are as follows: FY1973 ($38,000,000); FY1974 ($390,000,000); FY1975 ($1,157,000,000); FY1976 and transitional quarter($236,000,000); FY1977($2,953, 000,000); FY1978 ($1,673, 000,000); FY1979 ($6,000,000); FY1980 ($0). Third World category excludes Warsaw Pact nations, NATO nations, Europe, Japan, Australia, New Zealand.

2/ Excludes $3,271,000,000 from United States total for 1976, which represents the transitional quarter(FY 197T)

Source: U.S. Government

The trends shown in Table 1 for the Soviet Union and the major Western European suppliers is notably different. In the Carter period the value of their arms transfer agreements generally moved upward. The Soviet Union nearly doubled its transfer agreements in 1977-1980 from their 1973-1976 totals. The French, from 1977-1980, more than tripled their agreement values from the 1973-1976 period. The United Kingdom, West Germany, and Italy each doubled the values of their transfer agreements in 1977-1980 from the previous four year total. Even taking inflation into account, the major foreign arms suppliers made gains in real market shares compared to the United States.

Data in Table 2 show the variability in the values of arms deliveries from one year to the next, but also indicate a worldwide increase in the average current dollar values of arms deliveries since 1976. Nominal values of U.S. deliveries were relatively constant from 1977-1980, as were those of the United Kingdom, West Germany and Italy. French deliveries values increased overall from 1977-1980, and those of the Soviet Union also showed a clear average increase during these four years.

Table 3 shows the number of weapons delivered to the Third World by the major suppliers during the Carter period and a four-year Nixon-Ford period. This table adds a qualitative dimension to the discussion by indicating the types of major weapons items the major suppliers transferred.

Table 3 shows that the United States, during the period from 1973-1976, led in six of the twelve categories of weapons deliveries, while the Soviets led in five. During the period of the Carter Presidency (1977-1980), the U.S. led in only two of the twelve categories, while the Soviet Union led in seven and the combination of major Western European suppliers in three. Possible reasons for these overall trends will be discussed below, but it is certainly arguable that the Carter policy of restraint was partially responsible.

Table 2

ARMS DELIVERIES TO THE THIRD WORLD, BY SUPPLIER 1/
[In millions of current U.S. dollars]

	1973	1974	1975	1976	1977	1978	1979	1980
TOTAL------------	6,669	7,291	8,049	11,824	15,231	18,519	20,629	18,342
Non-Communist---------	2,719	4,411	5,049	7,624	9,551	11,529	10,609	10,672
Of which:								
2/ United States----	1,319	2,861	3,149	4,654	5,891	6,429	5,939	5,322
France-----------	620	480	480	930	1,010	1,660	1,280	2,490
United Kingdom---	360	450	410	530	720	1,020	770	600
West Germany-----	100	180	260	490	620	630	450	810
Italy------------	100	130	190	190	350	600	510	460
Other free world-	260	310	560	830	960	1,190	1,660	990
Communist-------------	3,950	2,880	3,000	4,200	5,680	6,990	10,020	7,670
Of which: U.S.S.R.---	3,550	2,500	2,400	3,410	4,990	6,100	9,110	6,690
Dollar inflation index(1973=100)--------	100	107	117	131	136	146	158	174

1/ U.S. data are for fiscal year given (and cover the period from July 1, 1972 through September 30, 1980). Foreign data are for the calendar year given. Statistics shown for foreign countries are based upon estimated selling prices. All prices given include the values of weapons, spare parts, construction, all associated services, military assistance and training programs. U.S. commercial sales contract values are excluded, as are values of the Military Assistance Service Funded account (MASF) which provided grant funding for South Vietnam, Laos, Philippines, Thailand, and South Korea. MASF deliveries values for FY1973 were $4,326,000,000; for FY1974 $1,159,000,000; for FY1975 $1,125,000,000. Related grant transfers to South Korea and Thailand, also excluded, were $11,000,000 in FY1979 and $10,000,000 in FY1980. All data are current as of January 1, 1981. Third World category excludes Warsaw Pact nations, NATO nations, Europe, Japan, Australia, New Zealand.

2/ United States totals for 1976 include the transitional quarter (FY 197T).

Source: U.S. Government

Table 3

WEAPONS DELIVERED BY MAJOR SUPPLIERS TO THE THIRD WORLD 1/

Weapons Category	United States	U.S.S.R	Major Western European 2/
1973-1976			
Tanks and Self-Propelled Guns	3,790	5,380	1,160
Artillery	3,920	6,020	780
APCs and Armored Cars	5,350	4,610	1,210
Major Surface Combatants	68	12	19
Minor Surface Combatants	153	48	157
Submarines	16	5	9
Supersonic Combat Aircraft	780	1,240	270
Subsonic Combat Aircraft	680	220	70
Other Aircraft	950	140	610
Helicopters	1,150	340	830
Guided Missile Boats	0	31	8
Surface-To-Air Missiles (SAMs)	1,230	10,240	1,070
1977-1980			
Tanks and Self-Propelled Guns	3,030	5,750	800
Artillery	2,780	7,150	1,130
APCs and Armored Cars	7,930	7,400	2,610
Major Surface Combatants	22	25	34
Minor Surface Combatants	33	107	95
Submarines	3	5	10
Supersonic Combat Aircraft	510	1,780	250
Subsonic Combat Aircraft	240	300	50
Other Aircraft	500	250	400
Helicopters	190	670	770
Guided Missile Boats	0	43	17
Surface-To-Air Missiles (SAMs)	4,960	11,400	1,200
1973-1980			
Tanks and Self-Propelled Guns	6,820	11,130	1,960
Artillery	6,700	13,170	1,910
APCs and Armored Cars	13,280	12,020	3,820
Major Surface Combatants	90	37	53
Minor Surface Combatants	186	155	252
Submarines	19	10	19
Supersonic Combat Aircraft	1,290	3,020	520
Subsonic Combat Aircraft	910	520	120
Other Aircraft	1,450	390	1,010
Helicopters	1,340	1,010	1,600
Guided Missile Boats	0	74	25
Surface-To-Air Missiles (SAMs)	6,190	21,640	2,270

1/ Third World category excludes Warsaw Pact nations, NATO nations, Europe, Japan, Australia and New Zealand. U.S. data are for fiscal years given (and cover the period from July 1, 1972 through September 30, 1980). Foreign data are for calendar years given.

2/ Major Western European includes France, United Kingdom, West Germany, and Italy totals as an aggregate figure.

Source: U.S. Government

Table 4

WEAPONS DELIVERED BY MAJOR SUPPLIERS TO EAST ASIA & THE PACIFIC 1/

Weapons Category	United States	U.S.S.R	Major Western European 2/
1973-1976			
Tanks and Self-Propelled Guns	1,060	500	10
Artillery	2,970	190	70
APCs and Armored Cars	1,580	150	20
Major Surface Combatants	33	0	1
Minor Surface Combatants	101	0	0
Submarines	2	0	0
Supersonic Combat Aircraft	350	20	0
Subsonic Combat Aircraft	280	0	20
Other Aircraft	660	110	140
Helicopters	800	60	50
Guided Missile Boats	0	2	5
Surface-To-Air Missiles (SAMs)	60	0	40
1977-1980			
Tanks and Self-Propelled Guns	690	580	70
Artillery	800	550	80
APCs and Armored Cars	920	250	200
Major Surface Combatants	12	6	1
Minor Surface Combatants	22	36	0
Submarines	0	0	0
Supersonic Combat Aircraft	170	220	0
Subsonic Combat Aircraft	130	70	10
Other Aircraft	110	70	80
Helicopters	140	100	100
Guided Missile Boats	0	4	3
Surface-To-Air Missiles (SAMs)	740	190	0
1973-1980			
Tanks and Self-Propelled Guns	1,750	1,080	80
Artillery	3,770	740	150
APCs and Armored Cars	2,500	400	220
Major Surface Combatants	45	6	2
Minor Surface Combatants	123	36	0
Submarines	2	0	0
Supersonic Combat Aircraft	520	240	0
Subsonic Combat Aircraft	410	70	30
Other Aircraft	770	180	220
Helicopters	940	160	150
Guided Missile Boats	0	6	8
Surface-To-Air Missiles (SAMs)	800	190	40

1/ Excludes Japan, Australia and New Zealand. U.S. data are for fiscal years given (and cover the period from July 1, 1972 through September 30, 1980). Foreign data are for calendar years given.

2/ Major Western European includes France, United Kingdom, West Germany, and Italy totals as an aggregate figure.

Source: U.S. Government

In examining the patterns of arms transfers to the major regions of the Third World, it is evident that the U.S. has dominated the arms market in East Asia and the Pacific (see Table 4). From 1973-1976 the U.S. in the Far East ranked first in deliveries in eleven of the twelve major categories of weapons, while from 1977-1980 the U.S. ranked first in eight categories, compared to three for the major Western European suppliers. In the Near East and South Asian region (see Table 5), the Soviet Union dominated deliveries, ranking first in seven categories in both the 1973-1976 and 1977-1980 periods. During the 1977-1980 period, the United States was in third place in this region, with the major Western European suppliers delivering more in three categories compared to two for the U.S.

The increasing prominence of the major West European suppliers in Latin America is shown by Table 6, which indicates that from 1973-1976 the region was roughly split among the major suppliers, with the U.S. leading in five categories to four for the USSR, and three for major Western suppliers. From 1977-1980 the major European suppliers siezed the overall lead in five weapons categories, compared to four for the Soviet Union and three for the United States.

The United States has not been the leading supplier of any category of weapons to Africa from 1973-1980 (see Table 7). The major supplier in Africa was the Soviet Union in both 1973-1976 and 1977-1980, with the lead in seven and eight categories respectively. The major Western European suppliers led in four categories in 1973-1976 and in three from 1977-1980.

These regional data collectively show that the Soviet Union is a very significant arms supplier in the Third World, particularly since 1976, and that the major Western European suppliers are major contenders for Third World markets in every region except East Asia and the Pacific.

Table 5

WEAPONS DELIVERED BY MAJOR SUPPLIERS TO NEAR EAST & SOUTH ASIA 1/

Weapons Category	United States	U.S.S.R	Major Western European 2/
1973-1976			
Tanks and Self-Propelled Guns	2,440	4,090	950
Artillery	710	3,710	320
APCs and Armored Cars	3,070	3,560	800
Major Surface Combatants	2	11	11
Minor Surface Combatants	22	21	70
Submarines	0	5	1
Supersonic Combat Aircraft	430	1,060	150
Subsonic Combat Aircraft	290	170	20
Other Aircraft	190	20	140
Helicopters	280	210	650
Guided Missile Boats	0	23	0
Surface-To-Air Missiles (SAMs)	1,170	9,260	780
1977-1980			
Tanks and Self-Propelled Guns	2,300	4,070	680
Artillery	900	4,350	740
APCs and Armored Cars	6,970	5,540	1,740
Major Surface Combatants	5	15	10
Minor Surface Combatants	8	5	37
Submarines	1	2	4
Supersonic Combat Aircraft	300	1,240	190
Subsonic Combat Aircraft	40	140	30
Other Aircraft	280	70	180
Helicopters	20	440	470
Guided Missile Boats	0	31	11
Surface-To-Air Missiles (SAMs)	4,220	9,460	1,130
1973-1980			
Tanks and Self [illegible] pelled Guns	4,740	8,160	1,630
Artillery	1,610	8,060	1,060
APCs and Armored Cars	10,040	9,100	2,540
Major Surface Combatants	7	26	21
Minor Surface Combatants	30	26	107
Submarines	1	7	5
Supersonic Combat Aircraft	730	2,300	340
Subsonic Combat Aircraft	330	240	50
Other Aircraft	470	90	320
Helicopters	300	650	1,120
Guided Missile Boats	0	54	11
Surface-To-Air Missiles (SAMs)	5,390	18,720	1,910

1/ U.S. data are for fiscal years given (and cover the period from July 1, 1972 through September 30, 1980). Foreign data are for calendar years given.

2/ Major Western European includes France, United Kingdom, West Germany, and Italy totals as an aggregate figure.

Source: U.S. Government

Table 6

WEAPONS DELIVERED BY MAJOR SUPPLIERS TO LATIN AMERICA 1/

Weapons Category	United States	U.S.S.R	Major Western European 2/
1973-1976			
Tanks and Self-Propelled Guns	280	330	140
Artillery	220	1,180	160
APCs and Armored Cars	670	50	150
Major Surface Combatants	33	0	5
Minor Surface Combatants	30	11	50
Submarines	14	0	8
Supersonic Combat Aircraft	0	40	70
Subsonic Combat Aircraft	110	0	20
Other Aircraft	90	0	130
Helicopters	60	40	50
Guided Missile Boats	0	4	3
Surface-To-Air Missiles (SAMs)	0	380	60
1977-1980			
Tanks and Self-Propelled Guns	20	40	30
Artillery	880	100	140
APCs and Armored Cars	30	100	150
Major Surface Combatants	5	0	14
Minor Surface Combatants	3	22	28
Submarines	2	3	6
Supersonic Combat Aircraft	20	110	40
Subsonic Combat Aircraft	70	0	0
Other Aircraft	100	50	60
Helicopters	30	30	90
Guided Missile Boats	0	6	2
Surface-To-Air Missiles (SAMs)	0	390	60
1973-1980			
Tanks and Self-Propelled Guns	300	370	170
Artillery	1,100	1,280	300
APCs and Armored Cars	700	150	300
Major Surface Combatants	38	0	19
Minor Surface Coubatants	33	33	78
Submarines	16	3	14
Supersonic Combat Aircraft	20	150	110
Subsonic Combat Aircraft	180	0	20
Other Aircraft	190	50	190
Helicopters	90	70	140
Guided Missile Boats	0	10	5
Surface-To-Air Missiles (SAMs)	0	770	120

1/ Excludes Canada. U.S. data are for fiscal years given (and cover the period from July 1, 1972 through September 30, 1980). Foreign data are for calendar years given.

2/ Major Western European includes France, United Kingdom, West Germany, and Italy totals as an aggregate figure.

Source: U.S. Government

Table 7

WEAPONS DELIVERED BY MAJOR SUPPLIERS TO AFRICA (SUB-SAHARAN) 1/

Weapons Category	United States	U.S.S.R	Major Western European 2/
1973-1976			
Tanks and Self-Propelled Guns	10	460	60
Artillery	20	940	230
APCs and Armored Cars	30	850	240
Major Surface Combatants	0	1	2
Minor Surface Combatants	0	16	37
Submarines	0	0	0
Supersonic Combat Aircraft	0	120	50
Subsonic Combat Aircraft	0	50	10
Other Aircraft	10	10	200
Helicopters	10	30	80
Guided Missile Boats	0	2	0
Surface-To-Air Missiles (SAMs)	0	600	190
1977-1980			
Tanks and Self-Propelled Guns	20	1,060	20
Artillery	200	2,150	170
APCs and Armored Cars	10	1,520	520
Major Surface Combatants	0	4	9
Minor Surface Combatants	0	44	30
Submarines	0	0	0
Supersonic Combat Aircraft	20	210	20
Subsonic Combat Aircraft	0	90	10
Other Aircraft	10	60	80
Helicopters	0	100	110
Guided Missile Boats	0	2	1
Surface-To-Air Missiles (SAMs)	0	1,360	10
1973-1980			
Tanks and Self-Propelled Guns	30	1,520	80
Artillery	220	3,090	400
APCs and Armored Cars	40	2,370	760
Major Surface Combatants	0	5	11
Minor Surface Combatants	0	60	67
Submarines	0	0	0
Supersonic Combat Aircraft	20	330	70
Subsonic Combat Aircraft	0	140	20
Other Aircraft	10	70	280
Helicopters	0	130	190
Guided Missile Boats	0	4	1
Surface-To-Air Missiles (SAMs)	0	1,960	200

1/ U.S. data are for fiscal years given (and cover the period from July 1, 1972 through September 30, 1980). Foreign data are for calendar years given.

2/ Major Western European includes France, United Kingdom, West Germany, and Italy totals as an aggregate figure.

Source: U.S. Government

DESCRIPTION OF ITEMS COUNTED IN WEAPONS CATEGORIES, 1973-1980

Tanks and Self-propelled Guns
- Light, medium and heavy tanks
- Self-propelled artillery
- Self-propelled assault guns

Artillery

Field and air defense artillery, mortars, rocket launchers, and recoilless rifles -- 100 mm. and over

FROG launchers — 100 mm. and over

Armored Personnel Carrier (APCs) and Armored Cars
- Personnel carriers, armored and amphibious
- Armored infantry fighting vehicles
- Armored reconnaissance and command vehicles

Major Surface Combatants

Aircraft carriers, cruisers, destroyers, frigates

Minor Surface Combatants
- Minesweepers, subchasers, motor torpedo boats
- Patrol craft, motor gunboats

Submarines

All submarines, including midget submarines

Guided Missile Patrol Boats

All boats in this class

Supersonic Combat Aircraft

All fighters and bombers designed to function operationally at speeds above Mach 1.

Subsonic Combat Aircraft

All fighters and bombers, including propeller driven, designed to function operationally at speeds below Mach 1.

Other Aircraft

All other fixed-wing aircraft, including trainers, transports, reconnaissance aircraft, and communications/utility aircraft

Helicopters

All helicopters, including combat and transport.

Surface-to-air Missiles (SAMs)

All air defense missiles, excluding those which are shoulder-fired.

NATIONS IN REGIONS IDENTIFIED IN ARMS DELIVERY TABLES AND CHARTS

EAST ASIA AND PACIFIC

- Australia
- Brunei
- Burma
- China
- Fiji
- French Polynesia
- Gilbert Islands
- Hong Kong
- Indonesia
- Japan
- Kampuchea (Cambodia)
- North Korea
- North Vietnam
- Laos
- Macao
- Malaysia
- Nauru
- New Caledonia
- New Hebrides
- New Zealand
- Norfolk Islands
- Paupa New Guinea
- Philippines
- Pitcairn
- Singapore
- Solomon Islands
- South Korea
- South Vietnam
- Taiwan
- Thailand
- Western Somoa

NEAR EAST AND SOUTH ASIA

- Afghanistan
- Algeria
- Bahrain
- Bangladesh
- Egypt
- India
- Iran
- Iraq
- Israel
- Jordan
- Kuwait
- Lebanon
- Libya
- Morocco
- Nepal
- North Yemen (Sana)
- Oman
- Pakistan
- Qatar
- Saudi Arabia
- South Yemen (Aden)
- Sri Lanka
- Syria
- Tunisia
- United Arab Emirates

EUROPE

- Albania
- Austria
- Bulgaria
- Belgium
- Canada
- Czechoslovakia
- Cyprus
- Denmark
- Finland
- France
- Germany, Democratic Republic
- Germany, Federal Republic
- Greece
- Hungary
- Iceland
- Ireland
- Italy
- Liechtenstein
- Luxembourg
- Malta
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Spain
- Sweden
- Switzerland
- Turkey
- United Kingdom
- U.S.S.R.
- Yugoslavia

NATIONS IN REGIONS IDENTIFIED IN ARMS DELIVERY TABLES AND CHARTS (cont.)

AFRICA (SUB-SAHARAN)

- Angola
- Benin
- Botswana
- Burundi
- Cameroon
- Cape Verde
- Central African Empire/Republic
- Chad
- Congo
- Djibouti
- Equatorial Guinea
- Ethiopia
- Gabon
- Gambia
- Ghana
- Guinea
- Guinea-Bissau
- Ivory Coast
- Kenya
- Lesotho
- Liberia
- Madagascar
- Malawi
- Mali
- Mauritania
- Mauritius
- Mozambique
- Niger
- Nigeria
- Reunion
- Rwanda
- Senegal
- Seychelles
- Sierra Leone
- Somalia
- South Africa
- St. Helena
- Sudan
- Swaziland
- Tanzania
- Togo
- Uganda
- Upper Volta
- Zaire
- Zambia
- Zimbabwe

LATIN AMERICA

- Antigua
- Argentina
- Bahamas
- Barbados
- Belize
- Bermuda
- Bolivia
- Brazil
- British Virgin Islands
- Cayman Islands
- Chile
- Colombia
- Costa Rica
- Cuba
- Dominica
- Dominican Republic
- Ecuador
- El Salvador
- Falkland Islands
- French Guiana
- Grenada
- Guadeloupe
- Guatemala
- Guyana
- Haiti
- Honduras
- Jamaica
- Martinique
- Mexico
- Montserrat
- Netherlands Antilles
- Nicaragua
- Panama
- Paraguay
- Peru
- St. Christ-Nevis
- St. Lucia
- St. Pierre and Miquelon
- St. Vincent
- Suriname
- Trinidad-Tobago
- Turks and Caicos
- Uruguay
- Venezuela

These data logically lead to a discussion of one of the cornerstones of the Carter arms sales policy — the multilateral restraint initiatives generally referred to as the conventional arms transfer (CAT) talks. The principal objective of the multilateral effort was to bring about reductions in worldwide arms transfers, particularly those which could stimulate regional arms races and create regional instability through introduction of new levels of weapons technology. From the outset, the multilateral restraint initiative was beset with difficulties. The Carter Administration first approached its allies, the major Western European suppliers, to see what might be achieved through negotiations on arms restraints. These suppliers said that restraint could pose serious problems for them and they wanted assurances of Soviet interest in arms sales restraint before they could consider restraint measures themselves.

The U.S. then turned to the Soviet Union to explore the issue. From December 1977 through December 1978, the United States and the Soviets held four rounds of talks on the subject of mutual arms restraint. No substantive discussions were held after December 1978.[+] The net outcome of these talks was to establish a framework for discussion of the subject, inasmuch as serious differences blocked tangible progress once detailed negotiations began in 1978. The Soviet invasion of Afghanistan chilled the atmosphere for further substantive talks; meanwhile the major Western European allies continued their customary arms sales practices and were not brought into the multilateral negotiations.

During the period from May 1977 to 1980, the qualitative controls of the Carter arms transfer policy were put to the test and 17 exceptions were made to the major guidelines. Thirteen of these exceptions involved co-production of howitzers, grenade launchers, rifles, various kinds of ammunition, and some less advanced air defense missiles and aircraft. Another notable exception to the policy was the decision to permit the development of an intermediate fighter aircraft for export purposes (the FX). The rationale the Administration gave for this decision was the perceived requirement to provide friends and allies with a fighter aircraft whose performance characteristics were between that of the F-5E and that of sophisticated American first-line fighters such as the F-16 and F-15. It was hoped that through this approach, it would be possible to provide for the legitimate defense requirements of friendly nations while discouraging purchases of more advanced and sophisticated first-line U.S. fighters that would be in excess of a given country's defense requirements.

Impact of the Carter Policy

After evaluating the practice of President Carter's conventional arms transfer policy, certain general conclusions are apparent. These are summarized below.

- President Carter did not make arms transfers by the U.S. an "exceptional implement" of foreign policy. The data presented in the foregoing tables and in the language of the President's May 19, 1977 policy statement reflect an intent to use arms transfers to further U.S. national security interests and those of allies and friendly nations. Sales to major allies were automatically excluded from the qualitative and quantitative guidelines of the policy. Within the framework of these guidelines, major controversial sales of significant weapons systems were made to countries such as Iran, Saudi Arabia, and Jordan on the grounds of national security. The Carter Administration made almost $40 billion of arms transfer agreements with the Third World.

However, the Carter Administration did turn down or turn off arms requests from over 60 countries valued at over $1 billion involving major weapons systems such as combat fighter aircraft, armored vehicles, Maverick, Harpoon and Sidewinder missiles. It turned down co-production requests for Maverick and Stinger missile motors and Dragon missile systems. Such turndowns and turnoffs were made for a variety of foreign policy, technological, threat analysis, and regional military capability reasons. But on balance, it does not appear accurate to describe the Carter Administration's use of arms transfers as an "exceptional implement" of American foreign policy.

— President Carter did achieve some modest reductions in the dollar volume of U.S. arms transfers to non-exempt countries under his policy, and deliveries of major weapons did tend to flatten out or decline during his tenure.

— As indicated by the data in the tables above (especially Table 1) and the record of the CAT talks, President Carter did not achieve his goal of reducing the worldwide volume of conventional arms traffic. Arms demands from Third World countries did increase throughout the 1970s, and arms exports to these nations are viewed by many supplier nations as essential to the economic viability of their domestic arms industries. Arms transfers also are considered an important foreign policy instrument for many supplier nations and a major component of their bilateral relationships with certain recipients. Not only did the CAT talks not result in any meaningful reductions in Soviet arms sales, but the major Western European suppliers were never seriously involved in the Carter multilateral initiative. The failure to include the

West Europeans is primarily due to their own vested economic stakes in the arms trade, their general skepticism of the Carter approach, and what appears to have been a strong reluctance on the part of the Carter Administration to press these allies hard to engage in arms sales restraint in the absence of a U.S.-Soviet bilateral agreement on the subject.

— The Soviet Union and the major Western European suppliers maintained or increased their shares of the Third World arms market from 1977-1980. This is particularly true of France and the USSR. Supplier relationships in regions other than East Asia and the Pacific became more competitive in the post-1976 period, as indicated by the weapons delivery tables (see Tables 4-7). In the Near East and South Asia, Latin America, and Africa, Western European suppliers dominate the arms market in a number of the major weapons categories. 1/

Unilateral restraint — such as was attempted by the Carter policy — has led to the loss of some business for U.S. arms manufacturers and may have undermined some established supplier-client relationships with specific countries in the Third World. The values of arms transfer agreements shown in Table 1 indicate that the major arms suppliers — other than the United States — have a tremendous amount of contract money presently committed to future weapons deliveries. That fact suggests that whatever arms sales vacuums that may have been created by the Carter unilateral

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1/ Delivery data are not necessarily indicative of future supply relationships between the major arms producers and purchasers. Many items delivered from 1977-1980 are long-lead time weapons systems that were contracted for prior to the Carter Presidency and arms transfer policy initiative.

restraint approach could be in the process of being filled by sales of the major Western Europeans, if not the Soviets.

- The Carter arms transfer policy established a more precise and systematic decision-making process and more specific guidelines for those in the arms sales chain. The policy placed the burden of proof on those who advocated a sale rather than those who opposed it. This framework increased the prospect that significant proposed sales would have to go through a rigorous review. The exceptions built into the Carter policy, however, did provide the means to permit sales — when national security considerations were overriding.

- Carter's policy required that American corporations obtain prior State Department approval before making a sales promotion to a foreign government. This directive increased the prospect that U.S. foreign policy makers could and would be able to evaluate the potential ramifications for American policy interests of a given sale before being confronted with a formal request for a sale resulting from premature promotional actions by U.S. arms sellers. It is easier to prevent serious friction between the United States and a foreign government over a prospective arms sale, if the sale in question can be be turned off first at the U.S. source. Although this control may have resulted in lost sales for U.S. industry in some cases, it reflects the Carter emphasis on foreign policy and national security considerations in arms sales decisions compared to economic factors.

- The qualitative restrictions in the Carter policy did lead to important turndowns or turnoffs of sales of some sophisticated, advanced weapons systems to all regions in the Third World. The U.S. was thus able to prevent or defer, in certain cases, the acquisition of weapons systems that it believed raised serious political or military issues justifying denial of the given system. The basis for individual turndowns or turnoffs is not clear-cut in several cases. Often it may have been a combination of many factors, from the sophistication of the system, concern for technology transfer, desire to avoid stimulating a regional arms race to the human rights record of the potential recipient.

It is important to note, however, that the record of U.S. denials with respect to the ultimate outcome of a sale has been mixed. Examples of turndowns that could be termed U.S. successes, because they helped prevent acquisition of (in the U.S. view) unnecessarily sophisticated weaponry, are the turndowns of the F-5E for Guatemala, the A-7 for Pakistan, the F-4 for Taiwan, the F-4G for Iran, and F-16s for Greece and Turkey. In each of these cases the Carter Administration decision did not lead to the procurement of an equivalent system from an alternative supplier by the prospective purchaser during the life of the Carter Administration. On the other hand, Carter Administration turndowns of the F-5E and veto of the Israeli Kfir for Ecuador, led to a Ecuadorian purchase of French Mirage F-1s. The veto of the Swedish Viggen — fighters having U.S. origin engines — to India resulted in an Indian purchase of British Jaguars. The prohibition of military sales to Argentina by legislation has led to Argentinian purchases of French helicopters, German submarines, and used Mirage jets from Israel.

In summary, the overall impact of the Carter Arms sales policy has been mixed. The policy raised expectations that were never fulfilled, but did result in some achievements in the arms control area. Its primary legacies were an institutionalized framework within which hard policy decisions can be made, and a set of qualitative criteria that can serve as the basis for consistent policy judgments on major arms transfer cases. Whether the Carter legacies in this area will outlast his Presidency is uncertain in light of the reassessment of the entire U.S. conventional arms transfer policy by the Reagan Administration.

III. PRESIDENT REAGAN'S ARMS TRANSFER POLICY

A. The July 8 Reagan Policy Directive

On July 8, 1981, President Ronald Reagan signed a directive on conventional arms transfer policy which superseded President Carter's policy directive of May 19, 1977, on the same subject. The Reagan policy directive emphasizes what the Reagan Administration views as the significant growth in recent years of "challenges and hostility toward fundamental United States interests, and the interests of its friends and allies . . . ." Such trends, the directive notes, "threaten stability in many regions" and "progress toward greater political and economic development."

Accordingly, the Reagan Administration believes that the U.S. must be prepared to help its "friends and allies" to strengthen their military capabilities through conventional arms transfers and other forms of security assistance. "Such transfers," the policy directive states, "complement American security commitments and serve important United States objectives." In this context, the Reagan Administration views conventional arms transfers and transfers of other defense articles and services as "an essential element of its global defense posture and an indispensable component of its foreign policy." Central objectives of the new Reagan arms transfer policy are summarized below.

Through judicious application conventional arms transfers can:

- help deter aggression by enhancing preparedness of friends and allies.
- increase the effectiveness of U.S. armed forces by improving America's ability in conjunction with allies and friends, "to project power in response to threats posed by mutual adversaries."
- strengthen and revitalize U.S. mutual security relationships through support of efforts to foster the capability of our forces "to deploy and operate with those of our friends and allies . . . ."
- demonstrate the enduring interest the U.S. has in the security of its partners and friends, and that "it will not allow them to be at a military disadvantage."

- "foster regional and internal stability, thus encouraging peaceful resolution of disputes and evolutionary change."

- "help to enhance United States defense production capabilities and efficiency."

To further these objectives the Reagan Administration will "tailor its approach to arms transfer requests to specific situations and exercise sufficient flexibility to respond promptly to changes affecting mutual interests of the United States and its allies and friends."

The Reagan policy directive emphasizes that the U.S. will "evaluate requests primarily in terms of their net contribution to enhanced deterrence and defense." Further, "high priority" will be accorded to requests from major alliance partners of the U.S. and to friendly nations with which it has cooperative security relationships.

Arms transfers decisions by the United States will be made after giving "due consideration to a broad range of factors including:"

- the degree to which the transfer is an appropriate response to the "military threats confronting the recipient."

- whether the transfer will enhance the ability of the recipient to participate with the U.S. in collective security efforts.

- whether the transfer will promote mutual interests through countering externally supported aggression.

- whether the transfer is consistent with U.S. interests "in maintaining stability within regions where friends of the United States may have differing objectives."

- "whether the transfer is compatible with the needs of United States forces, recognizing that occasions will arise when other nations may require scarce items on an emergency basis."

- whether items transferred "can be absorbed by the recipient without overburdening its military support system or financial resources."

- whether the "positive contributions" to U.S. "interests and objectives" more than counterbalance "any detrimental effects of the transfer."

The policy directive also states that "all requests for arms and equipment will be considered on a case-by-case basis." It also sets out other broad guidance regarding the transfer of weapons and related items generally. These policy provisions stipulate that:

— Coproduction requests and those for transfer of "sensitive or advanced technology will receive special scrutiny." Various factors will be taken into account in these cases including, "economic and industrial factors" for both the U.S. and the participating nations, "the importance of arms cooperation with NATO and other close friends and allies; potential third party transfers, and the protection of sensitive technology and military capabilities."

-- To help avoid any adverse impact on friendly and allied nations by encouraging them to assume burdens for which their economies are ill-prepared, "careful consideration will be given to lower-cost alternatives including adaptations of military equipment for sale abroad." It is recognized that "first-line systems may not suit the needs of many countries." Accordingly,"consideration of the full range of available American alternatives [among systems and equipment] will take place at every stage of review."

-- U.S. representatives overseas "will be expected to provide the same courtesies and assistance to firms that have obtained licenses to market items on the United States Munitions List as they would to those marketing other American products."

The policy directive further notes that the "United States retains a genuine interest in arms transfer restraint and remains prepared to consider specific proposals directed toward that end." Yet in the absence of notable interest in arms transfer limitations manifested by the Soviet Union, or the majority of other arms producing nations, the U.S. "will not jeopardize its own security needs through a program of unilateral restraint."

President Reagan's arms transfer policy directive concludes with the observation that "the realities of today's world demand that we pursue a sober, responsible and balanced arms transfer policy"—one that will advance the national security interests of both the United States and the free world. In addressing decisions regarding specific arms transfers and "opportunities for restraint among producers," the United States will "be guided by principle as well as by practical necessity. We will deal with the world as it is rather than as we would like it to be."

B. Major Differences Between the Carter and Reagan Arms Transfer Policies

After President Reagan's July 8 directive on conventional arms transfer policy was released, James L. Buckley, Under Secretary for Security Assistance, Science and Technology, testified before the Senate Foreign Relations Committee on July 28, to outline more specifically the Administration's new policy. Much of the analysis that follows is based on the testimony of Mr. Buckley before the Senate committee on July 28, the policy directive itself, and on an earlier speech by Under Secretary Buckley entitled, "Arms Transfers and the National Interest" delivered in Williamsburg, Virginia on May 21, 1981 before the Aerospace Industries Association.

That major differences exist between the Carter Administration's conventional arms transfer policy directive and that of the Reagan Administration is evident from a cursory review of their respective texts. But as noted above in the case of the Carter policy, what a policy represents in principle or language and what it consists of in practice can prove to be different things. So it may be with the Reagan policy as it is implemented. For now it can be said that clear distinctions exist "on paper" between the Reagan and Carter policies.

Basic Difference in Perception

A basic underlying distinction between the Carter and Reagan Administration arms transfer policy is one of disagreement, as Under Secretary Buckley put it, on May 21, "in the perception of where [U.S.] interests lie, how and by whom they are challenged, and how best to advance them." This basic difference in the perception of the nature of U.S. interests and the relationship of arms transfers to them helps to explain the specific differences in the respective policy approaches.

Carter believed arms transfers to the Third World should be controlled, with exceptions to the controls permitted only in specific cases where U.S. national security interests were compelling. The Reagan Administration's policy directive, on the other hand, is less concerned with the control of arms per se. It perceives a pervasive global threat from the Soviet Union requiring not only the effective re-building of the armed forces of the United States, but those of American friends and allies throughout the world as well. In the Third World, the Reagan Administration expects to see, as Under Secretary Buckley put it on July 28:

> ". . . a qualitative shift in the kinds of countries with which we will be concluding sales. They will include a larger number of developing countries . . .," because these nations are viewed as ones "which desperately need a more effective means of defending themselves against very real potential threats, countries with which we will want to develop cooperative relationships so that, in times of crisis, we may be able more effectively to project our own power and thus help deter aggression."

Consequently, the guidelines of the Reagan arms transfer policy—such as they are—are much more broad gauged than Carter's, and essentially constitute a listing of the benefits possible if arms transfers are made and a notation of certain factors to be considered as each case is reviewed. There are few explicit stipulations in the Reagan policy directive that could be described as requirements to withhold arms sales as a matter of basic principle. Other major differences in more specific areas between the Carter and Reagan policy are as follows:

Annual dollar "ceiling" on arms transfers

— Unlike the Carter Administration, the Reagan Administration does not propose a "ceiling" on the total dollar value of arms transfers authorized each year.

Nature of arms transfers as an instrument of U.S. foreign policy

-- The Reagan Administration sees arms transfers as "an indispensable component of its foreign policy" and an "essential element of its global defense posture." Arms transfers are seen as "a resource to be used with other resources for the achievement of national goals." The Carter view was that arms transfers were "an exceptional foreign policy implement, to be used only in instances where it can be clearly demonstrated that the transfer contributes to our national security interests."

Weapons produced only for export purposes

-- Carter's policy explicitly prohibited "development or significant modification of advanced weapons systems solely for export," and made an exception of this ban only for the FX fighter. The Reagan policy contains no prohibition on development of weapons systems solely for export and appears to encourage development of lower-cost "adaptations of military equipment for sale abroad." Under Secretary Buckley explicitly expressed such encouragement with respect to the FX fighter concept.

Ban on first introduction of new or advanced weapons

-- Carter's policy contained a prohibition against being the "first supplier to introduce into a region newly developed, advanced weapons systems" that might create a "new or significantly higher combat capability." The Reagan policy contains no such prohibition.

Ban on arms sales until systems are first provided to U.S. forces

-- Carter's policy prohibited the sale or coproduction of newly developed, advanced weapons systems until they were "operationally deployed with U.S. forces." The Reagan policy contains no prohibition of this nature.

Use of arms sales to lower U.S. procurement costs

-- Carter's policy sought to "remove the incentive to promote foreign sales in an effort to lower unit costs for Defense Department procurement." The Reagan policy directive explicitly notes that arms sales can "help to enhance United States defense production capabilities and efficiency." Or, as Under Secretary Buckley expressed it, arms transfers can make "a modest contribution to the needed upgrading of [the U.S.] defense manufacturing base."

Measures aimed at regulating and restricting arms sales promotion

-- Carter had the ITAR (International Traffic in Arms Regulations) amended to require "policy level authorization" by the State Department "for actions by agents of the United States or private manufacturers, which might promote the sale of arms abroad." He also had guidance issued to U.S. embassies and military representatives abroad that was intended to curtail arms sales promotion by them or through their provision of assistance to U.S. arms manufacturers. The Reagan Administration has rescinded the Carter guidance which directed U.S. overseas officials not to assist U.S. businessmen seeking to promote arms sales to friendly states. Such U.S. business representatives are now to receive the same "courtesies and assistance" that would be given "to those marketing other American products." In addition, the Reagan Administration plans to review U.S. arms sales licensing procedures "to see how they can be simplified."

Restrictions on Co-production

— The Carter policy stipulated that co-production agreements for "significant weapons, equipment, and major components" were prohibited. A "limited class of items" could be considered for co-production arrangements but with restrictions on "third-country exports." In practice, the Carter Administration granted the most (13) exceptions to this control. The Reagan policy calls for "special scrutiny" of co-production requests and those for the transfer of "sensitive or advanced technology." It stresses that various factors will be taken into account in co-production cases, including "economic and industrial" considerations for the participating nations and the U.S.; the "importance of arms cooperation with NATO, and other close friends and allies; potential third party transfers, and the protection of sensitive technology and military capabilities." The Reagan approach, then, is to permit co-production, although with special care.

Multilateral Arms Sales Restraint Efforts

— The Carter policy directive states that "actual reductions in the worldwide traffic in arms" will "require multilateral cooperation." To show its good faith in seeking such cooperation, the U.S. undertook a measure of unilateral arms sales restraint while negotiations proceeded with other arms suppliers. In practice, the U.S. pursued "multilateral restraint" through bilateral negotiations with the Soviet Union. Such negotiations did not achieve the Carter goal and were not extended to our major allies in Europe. The Reagan policy directive states that the Administration "retains a genuine interest in arms transfer restraint and remains prepared to consider specific proposals toward that end." However, the Administration holds the position that it will not jeopardize U.S. security needs or interests, or those of its friends abroad, "through a program of unilateral restraint."

Human Rights and Arms Transfers

— The Carter Policy stated that in formulating security assistance programs consistent with its arms transfer policy, the U.S. would attempt to "promote and advance respect for human rights in recipient countries." The Reagan policy directive makes no explicit mention of human rights considerations as a factor in arms transfer decision-making. Indeed, in a May 21 address, Under Secretary Buckley characterized Congress' adoption of "a series of restrictions on sales" to nations whose behavior we disapproved of "in the case of human rights" as compounding the "self-inflicted injuries," which, in his view, had resulted from the Carter approach to arms transfer policy. Later, in his testimony before the Senate Foreign Relations Committee on July 28, Mr. Buckley stated that human rights would be one among other factors taken into account in making case-by-case determinations regarding arms transfers. He was quick to add, however, that under the Reagan policy, the "principal purpose in transferring arms to another country is not to help a particular regime but to buttress our own security and our own interests." In this context, it seems reasonably clear that human rights considerations in arms transfer decision-making will be de-emphasized under the Reagan policy.

C. Consistency With the Arms Export Control Act

For the most part, U.S. arms transfer policy is legislatively governed by the Arms Export Control Act (AECA). Within this statute, Congress has over the years expressed objectives, directions, intent, restrictions, and other statements of purpose surrounding weapons sales. While the policy developed by President Reagan does not specifically contradict the provisions of the Act, the Presidential directive of July 8, 1981 does not present a balanced and comprehensive reflection of the policy direction of the AECA. Although many of the positions taken by the Administration in its new policy are in line with provisions of the AECA, large differences in overall emphasis exist between the directive and the Act.

The thrust of President Reagan's policy is expressed in positive terms, stating that "Prudently pursued, arms transfers can strengthen us. . . . The United States therefore views the transfer of conventional arms and defense articles and services as an essential element of its global defense posture and an indispensable component of its foreign policy." The policy statement establishes a strong link between arms transfers and national security interests of the United States and its allies, while also emphasizing the idea that transfers can "foster regional and internal stability."

These principle objectives of the new policy are compatible with several provisions of the AECA. The Act recognizes the existence of: "valid requirements for effective and mutually beneficial defense relationships in order to maintain and foster the environment of international peace and security"; the need "for international defense cooperation among the United States and those friendly countries to which it is allied by mutual defense treaties"; and the need "to facilitate the common defense by entering into international arrangements with friendly countries." The legislation further authorizes arms sales by the U.S. Government "in furtherance of the security objectives of the United States and of the purposes and principles of the United Nations Charter" but only after the President has determined that weapons transfers "will strengthen the security of the United States and promote world peace."

However, the tone of the Reagan directive and that of the Act appear substantially different, leaving one with contrasting impressions of the overall intent of U.S. arms transfers policy. The Administration's positive approach in the directive implies that foreign arms sales will be promoted. The intent of changes to the Act approved by Congress in 1976 called for reduced arms transers. The Senate Foreign Relations Committee viewed the proposed amendments as a marked shift in "policy emphasis from expanding arms exports to strengthening controls, especially Congressional controls." This position was further reinforced as Congress changed the name of the existing law from the Foreign Military Sales Act to the Arms Export Control Act. Congress also inserted its non-binding "sense" that arms transfers should not exceed levels existing in 1976.

In addition, the legislation balances the provisions concerning national security and mutual defense requirements with concerns over arms control and the proliferation of conventional arms. The Act declares that "it remains the policy of the United States to encourage regional arms control and disarmament agreements and to discourage arms races." The AECA and other recently approved security assistance authorization bills have stressed the role of the United States in curbing the international flow of arms through multilateral channels. President Reagan's policy notes that the United States "retains genuine interest in arms transfer restraint and remains prepared to consider specific proposals directed toward that end." Under Secretary of State James Buckley, in remarks before the Senate Foreign Relations Committee on July 28, expressed a similar view, stating that the U.S. will "examine ways to pursue a regime of multilateral restraint and to consider seriously the proposals of others." This, however, appears to be a more passive approach to international controls than that intended by the AECA. Rather than merely "examining" possible policies or "considering" the proposals of others, the Act states it to be the policy of the United States to "exert leadership in the world community to bring about arrangements for reducing the international trade in implements of war". Furthermore, the legislation states a sense of the Congress that the President "should seek to initiate multilateral discussions" and "undertake a concerted effort to convene an international conference" on arms transfer restraint.

One objective mentioned in the new policy statement that does appear to be inconsistent with the AECA is the use of arms sales to enhance "United States defense production capabilities and efficiency." It can certainly be argued that an active arms transfers program will have the effect of providing more business for the U.S. defense industry, thereby helping to keep the industry healthy and vigorous for producing items for U.S. forces, perhaps even at lower costs. However, while the AECA requires special emphasis on procurement of items in the United States so that foreign procurement or coproduction arrangements do not adversely effect the U.S. economy or its industrial mobilization base, the Act does not suggest that arms sales should serve as a positive force in maintaining a strong American defense industry. This notion is somewhat contrary to the balanced objectives expressed in the AECA which recognize legitimate national security needs for arms transfers while also promoting controls and restraints so that the sales do not accelerate out of control, fueled by domestic financial factors.

President Reagan's policy directive also includes a list of factors to be considered in evaluating an arms sales request. Relationships between arms sales and some of these considerations are each addressed in the legislation in terms similar to the policy statement. These factors include the military threats confronting the recipient, ability of the recipient to participate in collective security arrangements, mutual interests in countering externally supported aggression, needs of the United States defense forces, and the ability of the recipient to absorb the financial burden imposed by sales. The Act specifies that arms may be sold by the U.S. Government "to friendly countries solely for internal security, for legitimate self defense, to permit the recipient country to participate in regional or collective arrangements...." The AECA further stipulates that "Sales of defense articles and defense services which could have significant adverse impact on the combat readiness of the Armed Forces of the United States shall be kept to an absolute minimum." Finally, the legislation expresses a sense of the Congress that sales be approved only when they are consistent with several factors, including the "economic and financial capability of the recipient country".

Although these considerations outlined in the new policy are consistent with the provisions of the AECA, they do not include some of the key factors that have been added to the legislation by Congress in recent years. Perhaps the most notable and controversial issue is human rights. The Act includes a sense of the Congress that sales should not be approved in cases where the beneficiaries would be military dictators who deny the "growth of fundamental rights or social progress to their own people." Section 502B of the Foreign Assistance Act of 1961 restricts arms sales, credits, and licenses under the AECA, blocking aid and transfers due to human rights violations.

Although mention of human rights is missing from the Reagan policy, Under Secretary Buckley, in the hearings of July 28, stated that the directive did not list all factors that would be taken into account and that human rights was an "obvious" case. Mr. Buckley remarked that "it is hard to imagine any Administration worthy of representing the American people that will not use its influence to the maximum to encourage other societies to meet our standards in this regard." However, in an earlier statement made by Mr. Buckley on May 21 in Williamsburg, Virginia, he argued that restrictions on sales due to human rights behavior, while well intentioned, "have had little detectable impact on such behavior" and have led "at times to the awkward result of undercutting the capabilities of strategically located nations. . . ." This remark, coupled with other general statements made by the Administration concerning U.S. human rights policy, strongly suggests that human rights considerations may be emphasized far less than intended by various statutes, such as section 502B.

Other factors mentioned in law but not in the arms transfer directive, including nuclear proliferation, discrimination, and consistency with other U.S. foreign aid programs, may likewise be de-emphasized when making decisions on an arms sales request.

D. Implications of the Reagan Changes in Policy

Broad Implications of Reagan Arms Transfer Policy

As stated in the Reagan policy directive and as articulated by Under Secretary of State James Buckley, it is clear that the current Administration intends to increase the use and enhance the role of arms transfers as an instrument of American foreign policy. There is much in the policy directive — as elaborated on by Mr. Buckley — that resembles the thesis of former President Nixon's Guam doctrine. Simply stated, since the United States cannot police the globe alone, it should seek to enhance the ability of strategically located nations to act in their own self-defense through the use of arms transfers.

While Under Secretary Buckley acknowledged on May 21 that "military power," — whether that of the U.S., its friends, or both — cannot alone "solve the large array of problems which currently beset the community of nations. . . What it can do," he asserted, "is help to reestablish some sense of equilibrium. . . ." The Reagan policy directive and statements of Administration officials appear to be based on an assumption that "stability" and greater military and political cooperation will be the result of American arms transfers to friendly nations in the Third World.

This premise raises important questions if only because of the checkered history of arms transfers as an instrument of policy. There is no question that the United States has on occasion used arms transfers with great success in advancing the national security interests. The rebuilding of NATO countries through its Military Assistance Program (MAP) after World War II, and the rearmament of an allied Japan are tangible success stories.
But the U.S. has also suffered notable setbacks in its security interests, despite the large infusion of military hardware into particular countries.

The American experiences in Vietnam, Iran, and Ethiopia graphically illustrate that arms transfers, and even the use of American troops, do not ensure "stability" in a country or region or guarantee the continued good will and cooperation of the recipient nation. The Soviet Union has had similar setbacks in the use of arms sales as an instrument of foreign policy in nations such as Egypt, Somalia, and even a fellow Communist state, the People's Republic of China. In short, arms transfers are an unwieldly instrument of foreign policy and they do not always provide the results expected.

Indeed, arms transfers have the potential of stimulating the "instability" in a region they are intended to eliminate. Should a nation believe that it needs more sophisticated weapons systems because of the capabilities of systems supplied to a regional competitor, a destabilizing arms race could result. The destructive capabilities of regional competitors will spiral upward as the countries obtain more weapons, larger warheads, more accurate delivery systems, and longer range weapons. A danger exists that regional conflicts could be stimulated unnecessarily by overzealous introduction of military hardware into nations whose security problems might be effectively dealt with by other means. If a regional military balance begins to shift, or if a nation perceives a growing and intolerable vulnerability to the military force of its neighbor(s), it may feel compelled to conduct a preemptive attack to restore its security. Additionally, an arms race can consume a great portion of the foreign exchange of poor nations and undermine their economic development programs.

At times it may seem very useful, or even necessary, to allow the transfer of requested weapons to a strategic ally or friendly state to retain that government's confidence and cooperation. This effort may or may not be effective in the short term and is less likely to be effective over time. Simultaneously, the transfer of weapons to one state may anger and threaten other nations in the region. The transfer may sour U.S. relations with those regional neighbors of the U.S. client, and the net effect of the transfer may be the alienation of more states.

In response to these concerns, Under Secretary Buckley said on July 28 that "the enormous cost of modern weapons and the state of the world economy provide their own restraints on the capacity and appetite of would-be purchasers." However, the state of the world economy and the high cost of modern weaponry will not likely deter a friendly nation from seeking more sophisticated weaponry from the United States if it gains the impression that the U.S. Administration is predisposed to sell such items and to provide various concessional FMS credits to friendly Third World nations. The relatively broad-gauged "case-by-case" criteria to be used for making arms transfers under the Reagan policy directive lend credence to the view that the Administration will sell a wide-variety and large quantities of weapons to friendly countries that can develop an acceptable rationale for the transfer.

The Reagan directive and Under Secretary Buckley's testimony of July 28 indicate that an effort will be made to "discriminate between the widely varying threats faced by friends and allies who have widely varying needs and absorptive capacities," and to encourage the consideration of "less expensive and more easily maintained systems." Yet there is concern that the Administration is undercutting these self proclaimed goals.

As is discussed in greater detail in case studies below, the Reagan Administration is seriously reviewing the requests of both Venezeula and Pakistan for the purchase of the first-line U.S. fighter aircraft, the F-16A. While not pre-judging the relative merits of either case, it must be noted that such prospective sales—particularly the Venezuela case—seriously risk undermining the viability of the concept of an F-X export fighter. The F-X concept is predicated on the view that many client nations need a more sophisticated fighter aircraft with performance characteristics beyond that of the F-5E but below that of the highly advanced, and expensive, F-16. The Reagan Administration has endorsed the F-X concept in both the arms transfer directive and in Under Secretary Buckley's testimony on July 28.

If Pakistan, with serious financial difficulties, and Venezuela, with a dubious military requirement, can obtain the highly sophisticated F-16A from the U.S, it is difficult to see why other friendly nations would not also seek to obtain it instead of the less capable F-X fighter. There would seem to be no basic impediment to such requests, except the cost of the F-16. But if the Reagan Administration is prepared and able to provide concessional FMS financing, even that inhibitor could be removed.

Implications for U.S. arms inventories

Under the Reagan Administration's arms transfer policy, increased sales of military items to foreign countries would be met for the most part through expanded commercial production and not by means of drawing down service inventories. As in the past, however, if a specific contingency should arise in which a friendly state required military assistance rapidly and the U.S. Government determined that important national interests were at stake, a decision might very well be made to tap service inventories. These items could then be replaced at a later date. This position is articulated in President Reagan's July 9, 1981, directive on conventional arms transfer policy. To quote:

> In making arms transfer decisions, the United States will give due consideration to a broad range of factors including:
>
> . . . .

> whether the transfer is compatible with the needs of United States forces, recognizing that occasions will arise when other nations may require scarce items on an emergency basis.

The most recent and well-publicized example of an international crisis that led to the transfer of large quantities of U.S. military equipment drawn from service inventories was the Arab-Israeli War of 1973. The items sent to Israel on an urgent basis included some of the most technologically advanced and scarce weapons available. A considerable amount of criticism was voiced by those who felt that the action left the United States in a vulnerable position. Subsequently, legislation was enacted by the Congress stipulating that transfers of defense articles and services which could have adverse effect on combat readiness of the U.S. Armed Forces must be kept to an absolute minimum. Various reporting and certifying requirements were imposed on the President as well. These requirements remain in effect today.

The position of the Reagan Administration on this question was reiterated by Under Secretary of State James L. Buckley, during testimony before the Senate Foreign Relations Committee. In his July 28, 1981 statement, he pointed out that, in weighing each prospective transfer of U.S. weaponry, the Administration would consider "whether the needs of the U.S. forces would be adversely affected by the transfer, bearing in mind that on occasion scarce items may be needed by friends to meet emergencies."

It is worth noting, in this connection, that occasions requiring a draw-down of service inventories may increase in number as a result of the Reagan Administration's arms sales policy. The U.S. Government seems to be more willing now than in the recent past to consider the transfer of advanced, high performance aircraft and other sophisticated weapons to friendly countries outside of NATO. A recent example is the sale of F-16 fighers to South Korea and, currently, the Administration is considering sales of F-16s to Pakistan, Venezuela, and Egypt. As the number of countries acquiring such systems increases, there is a greater prospect that military needs will develop among purchasers that will require the U.S. Government to dip into reserve stocks of end items or spare parts, since replacement of items through normal commercial channels would likely prove to be uncertain and slow. The Reagan Administration proposed the establishment of a Special Defense Acquisition Fund designed to help alleviate this problem by building stocks of items frequently purchased by FMS clients.

Co-production: implications of Reagan Policy

The Reagan policy statement implies a more lenient attitude toward co-production arrangements than did the Carter policy statement. It remains to be seen whether the practice of the Reagan Administration will be more lenient than that of the Carter Administration, which did allow several exceptions to its co-production prohibition.

Foreign buyers are ever more frequently demanding the transfer of production technology as a condition of their purchase of defense hardware. U.S. industrialists and Administration officials argue that if the United States is to remain competitive in the arms trade and increase its arms sales, it must meet more of these demands for technology. Co-production has been applauded by many Congressmen and officials of the present and previous administrations as a means of pursuing rationalization, standardization, and inter-operability of forces and equipment by the United States and its NATO allies. However, some Members of Congress have questioned whether co-production with our allies has efficiently and effectively served U.S. economic and military interests. Co-production arrangements with Third World countries are more controversial. As an administration official recently pointed out, the short-term gains realized through co-production are often accompanied by serious long-term problems, such as the creation of new arms production centers, new competitors, and embarassments over controversial sales of co-produced military equipment. 2/

The transfer of carefully chosen military technology to an ally or friendly country may enhance that country's deterrent power and help preserve world peace and U.S. security. But poorly conceived or excessive transfers may incite arms races and may even contribute to initiation of armed conflict. Which of these results is more likely to occur is the key question in assessing the advisability of a proposed co-production arrangement. While this assessment is very difficult, the decision is further complicated by inherent long-term effects of technology transfers. The United States would incur serious risks if it attempted to resolve short-term problems by selling military-industrial technology, or even if it used co-production to resolve long-term problems in a country of questionable stability or in which the U.S. position was not exceptionally secure.

Nations frequently seek Western arms production technology to achieve a greater degree of military independence. With a domestic supply of weapons, ammunition, and military equipment, a nation has greater flexibility and can assume more initiative in the use of its armed forces. In limited operations, it would have some freedom of action without first obtaining required hardware or a pledge of support from a foreign source.

In many cases it is in U.S. interests for its friends and allies to have an independent capability to repel an enemy attack and to sustain defensive operations. With such a military capability, countries such as South Korea or Israel might deter aggression and defend their sovereignty and territorial

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2/ Brown, Les, Deputy Director of the Bureau of Politico-Military Affairs, Department of State, speaking before the American Institute of Aeronautics and Astronautics, Washington, D.C., June 30, 1981.

integrity without massive U.S. involvement. However, even if a country increases its independence from the United States only for brief and geographically limited operations, the direct and immediate influence of the United States is somewhat reduced. There have been historic cases in which it was not in the U.S. interest for a particular friendly nation to have much of an independent military capability. When Syngman Rhee ruled South Korea, he often spoke of reunifying the peninsula by force. Similarly, Chiang Kai-Shek spoke of liberating Mainland China from communist domination. U.S. interests were served by providing these leaders with a limited capability to deter or repel aggression, but those interests might have been endangered if the United States had provided their friends with the technology to produce their own military equipment. Similarly, some new arms producers may become more adventuresome or even aggressive knowing that a sudden arms embargo by a single source of equipment will not foil their plans.

Selling arms factories to developing countries also multiplies the potential number of arms merchants and further complicates the problem of restraining arms traffic. The lack of success achieved by the United States in leading its Western European allies to greater restraint in arms transfers is credited largely to their overriding economic and political interests. Certainly the developing countries will not be more immune to such pressures than the industrial nations of Europe.

New patterns of competition and cooperation will probably develop as new manufacturers enter mass production of increasingly modern weapons and express a willingness to sell those weapons to nations and sub-national groups that had previously had some difficulty obtaining arms and equipment. As more factories join production and try to achieve economy of scale, the total number of weapons produced each year will grow proportionally. And if it is competition that makes business work harder, take more risks, and develop more innovative products, the world arms market is in for a burst of activity.

Co-production programs can have implications for the U.S. military industrial base. In a general war, or intense regional war, the U.S. capacity to produce weapons, ammunition, and equipment could be strained. Rather than trying to maintain facilities in the United States to produce sufficient quantities of ammunition, rockets, bombs, missiles, and other expendable items for ourselves and our allies, perhaps it is wiser to disperse certain production facilities among our allies and friendly countries. It also may be beneficial for the United States to transfer production technology of older equipment to developing nations so that U.S. plants can produce more advanced weapons and equipment. One constraint on such technology transfers is that the United States can maintain efficient production only if it is servicing the needs of several nations. If one client begins producing his own ammunition, spare parts, or weapon systems, the U.S. producer loses some economy of scale. If too many nations enter the field, especially if they are allowed to sell their products to third countries, some U.S. production lines could be forced to close.

Economic arguments can also be made in support of and against co-production arrangements. The foreign exchange earnings derived from a technology transfer (royalties, service and consultant fees, sales of component parts) are generally less than earnings from sales of U.S.-made products. However, if a developing country refuses to buy products, a sale of technology clearly brings greater earnings than no sale at all. Frequently, if the United States does not provide production technology, another country will, and the resulting economic and political ramifications may force the United States into an arrangement that is less than optimal for U.S. interests. Royalties are considered profits by a private company and can be used to fund new research and development, plant expansion, or dividends for stockholders. If U.S. Government-owned technology is sold to a foreign country, part of the research and production costs are shared with the purchaser, and the U.S. Treasury is reimbursed. The labor sector tends to argue that technology transfers export jobs, while business counters that derived profits allow U.S. industry to remain at the top of the market, thereby insuring employment opportunities for years to come.

Even with a very stringent technology transfer policy, the United States can not prevent the spread of military industrialization. On the other hand, the United States has helped establish arsenals in several countries through its co-production programs and commercial manufacturing license arrangements for defense articles, and the advisability of continuing this practice remains an open question. There is also apparent truth in the charge that the United States and other developed countries have "forced" some client states to turn to domestic arms production by imposing unacceptable conditions on further arms sales or by declaring an arms embargo against an established customer. The very high prices charged for advanced systems also pushes some nations to seek the status of a profit-making producer rather than a debt-ridden consumer. While it appears too late to shut the door on the spread of military industrialization, the United States has an important interest in and responsibility for regulating the flow of defense technology.

Competitiveness of U.S. arms industry with foreign arms suppliers

The U.S. arms industry is generally regarded as capable of competing effectively with foreign industries for orders from abroad. A number of important factors need to be weighed in applying this generalization to specific cases, however. At the outset, even before a straight-forward comparison of products and related services is considered, it is necessary to recognize that no production facilities or capacity may currently exist in the United States for certain weapons systems or other military items in demand by foreign countries. In this situation, the start up conversion or capital investment costs would tend to place U.S. industry in a position of competitive disadvantage with foreign firms where there was already existing capacity -- at least at the outset. Also, it is important to ask whether, in the specific case considered, the U.S. manufacturer is competing for a new market or is trying to displace an existing foreign supplier. It is substantially more difficult, as a rule, to take away a market from someone else than it is to compete for and win a new one. In the former case, the purchasing country must consider that changing suppliers, as well as major weapons systems, might:

(1) necessitate a costly program of retraining;
(2) produce problems of systems incompatibility; and,
(3) generate political stress with the government of the previous supplier.

Aside from the considerations mentioned above, the important factors most often weighed in determining competitiveness are price, performance, and follow-on maintenance. When all three of these are weighed together, the attractiveness to foreign purchasers of U.S. military items continues generally to rank high. However, the high cost of many major U.S. weapons systems has served in the recent past to discourage purchase of these items by less affluent or cost-conscious countries. Not only is the price tag generally prohibitive, but the highly sophisticated technology contained in these systems requires extensive training and support for effective use. In its current approach to arms transfers, the Reagan Administration has indicated a willingness to facilitate important foreign arms transfers to "poorer" nations through "concessional" Foreign Military Sales (FMS) program financing arrangements.

Similarly, the Administration has declared its support of the concept of export production of certain weapons, such as "F-X" aircraft, as a means of satisfying the needs of countries that are looking for a capability somewhere between old, increasingly obsolescent systems and new, highly advanced as well as costly systems. Although as indicated earlier, the "F-X" concept itself may be undercut by the perception by foreign clients that they may be able to obtain more advanced fighter aircraft from this Administration should they seek them.

It is worth noting, also, that the current Administration believes that an emphasis on export-related production will "make a modest contribution" to the upgrading of the U.S. defense manufacturing base. The increased demand for military items, it is argued, will enable defense industries to expand and employ idle capacity, as well as to adopt other measures that should help them achieve a higher level of efficiency in their operations. Greater efficiency will lead, in turn, to higher profits -- much of which, it is anticipated, will be reinvested in new and expanded facilities and equipment, thereby completing the ideal cycle of modernization.

IV. PROSPECTIVE ARMS TRANSFERS TO SELECTED COUNTRIES

The Administration has indicated that it may transfer defense articles or services to several countries in the near future. Following is a discussion of major controversial aspects of potential transfers of U.S. military weapons or equipment to: Venezuela, Pakistan, and the People's Republic of China.

A. Prospective U.S. Arms Transfers to Venezuela

The Reagan Administration is reportedly on the verge of approving a request from the Venezuelan Government to purchase 16 to 24 F-16 fighter aircraft. Such action would mark a substantial departure from traditional U.S. policy regarding military aid and sales to Latin American countries where the United States has been very reluctant to provide sophisticated weapons, particularly high performance jet aircraft. Since no formal decision on the sale has been made, a full justification is not available and specific details are limited. The Administration thus far has viewed the request in favorable terms due to Venezuela's cooperative attitude toward U.S. policy in Latin America and the Caribbean and because Venezuela is an important U.S. supplier of oil. Critics of the proposed sale, however, argue that Venezuela faces no external threat that warrants such a sophisticated aircraft and that the transfer of F-16s to Venezuela may set off a serious arms race in the region since other nations would be expected to make similar requests.

Background

The United States has long pursued a policy of discouraging transfers of highly sophisticated aircraft to countries of Latin America. Following World War II, the United States, as the main regional supplier of arms, assumed a policy designed to maintain external defense capabilities and also restrain arms races within the hemisphere. Within this policy, the U.S. sought to establish some semblance of parity among neighboring countries and to keep the level of weapons sophistication and performance low, drawing primarily on surplus World War II and Korea weapons stockpiles for sales. Despite this U.S. policy, Great Britain became an active arms dealer in the region selling first-generation subsonic military jet aircraft.

Criticism of U.S. military assistance programs in Latin America developed in the late 1950s and early 1960s with charges that military governments in the region were purchasing arms from the United States in order to maintain their own power rather than directing their limited resources to social and economic development. Lack of attention to economic needs was viewed by some as fueling subversion within some nations, an activity which was then being promoted by the Castro government in Cuba. Accordingly, Congress enacted legislation in the early 1960s placing an annual ceiling on U.S. military assistance to Latin America and blocking the use of credits for the sale of sophisticated weapons.

However, tensions developed between the U.S. and some governments that wanted to modernize their armed forces with more modern conventional arms—particularly with high performance combat aircraft. As a result, Latin American nations began to turn to the British, French, West Germans, and Canadians for major weapon purchases, including sophisticated jet aircraft. After the United States agreed to supply Argentina with the A-4B light attack aircraft in 1965, Chile followed with a request to purchase the higher performance F-5 Freedom Fighter. Latin American governments were notified that the F-5 would not be available until 1969 and the U.S. offered instead to sell the A-4B and the F-86, the latter a fighter used extensively during the Korean conflict. Venezuela eventually purchased 22 of the F-86s but Chile turned to the British

FGA-9 Hawker Hunter. 3/ During the period 1968-1972, Europe and Canada accounted for $1.3 billion (83.5%) of arms sales in the region (excluding Cuba). 4/ The supersonic barrier in Latin America was broken with the delivery during 1969-1970 of 12 French built Mirage-5 fighters. France has since sold various models of the Mirage to Argentina, Brazil, Colombia, Chile, Venezuela, and Ecuador while Peru ordered 36 Sukhoi Su-22 supersonic fighters from the Soviet Union in 1976. 5/ In most cases where these sales occurred, the U.S. refused to furnish similar aircraft.

U.S. policy against transferring sophisticated weapons or high performance jet aircraft to developing countries was further strengthened in 1968 with passage of the Foreign Military Sales Act which barred the use of FMS credits for such sales except in the case of specified countries. No Latin American countries were among those listed. While this unilateral policy of restraint in sophisticated arms sales in the region continued through the Carter Administration, the ceiling on aid and sales to Latin America was repealed in 1974. This, however, had little noticable effect on the general trend of supersonic aircraft sales to the region since the executive branch has subsequently followed a policy of restraint. During the period 1973-1980, the four leading Western European suppliers sold 110 supersonic jets in the area; the U.S. Government meanwhile transferred a total of 20. Although the United States continued to be a leading supplier of subsonic aircraft during these years, President Carter refused the sale of combat aircraft more advanced

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3/ Einaudi, Luigi, et. al. Arms Transfer to Latin America: Toward a Policy of Mutual Respect. RAND Corp., June 1973, Santa Monica, California, p. 2.

4/ U.S. Government sources.

5/ Defense Marketing Service. Foreign Military Markets: South America and Australia. Greenwich, Connecticut.

than the F-5 and the A-4. 6/ (See Table 6 and Latin American section of Appendix I. elsewhere in this study).

F-16 Sale to Venezuela

Earlier this year, a Venezuelan Air Force evaluation team conducted tests on the F-16 and explored with the Reagan Administration the possibility of purchasing 16-24 of the aircraft. A similar test group went to France in May to evaluate the Mirage 50 which was also under consideration to upgrade Venezuela's aging aircraft inventory. It seems clear now, however, that the Herrera Campins government is set on purchasing the F-16s. In a June 30 news conference, the Venezuelan President stated that he had no reason to doubt that the sale would occur but added that he would first wait for formal approval from the U.S. Government. Chairman of the Venezuelan special Foreign Ministry advisory commission Jose Rodriguez Iturbe defended the purchase stating that the F-16s would not only help defend Venezuelan borders and its large petroleum facilities, but also protect what he termed Venezuela's "vital area: the middle of Latin America and the Caribbean where Venezuela has political, economic, and strategic interests." 7/ Venezuela has for some time been demonstrating an interest in assuming a greater independent role in Latin America, particularly in the Caribbean area.

Arguments in Favor of the Sale

Venezuela has been a long-time friend of the U.S. representing one of the most stable and moderate democracies in Latin America. The Government of President Luis Herrera Campins has been particularly supportive of current

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6/ U.S. Government Sources.

7/ Reported by Spanish Wire Service (EFE), Madrid, June 18, 1981. Text reproduced by Foreign Broadcast Information Service (FBIS), Latin America daily edition, June 22, 1981, p. V4.

U.S. policy in the region, including American efforts in El Salvador to resist armed opposition from factions on the right and left. The Reagan Administration characterizes Venezuela as "the key to stability in the Caribbean area. It shares U.S. objectives in cooperating in the defense of the Western Hemisphere against aggression or subversion, opposing international terrorism, accelerating the economic and social development of the developing world, reducing nuclear proliferation and strengthening democratic institutions and human rights." 8/ Venezuela is also a U.S. oil supplier, whose sales accounted for 3.7 percent of U.S. imported crude oil last year. Approval of the aircraft sale could be viewed in political terms as a logical response to assist an important friend which shares common regional objectives.

Some analysts also see the F-16 sale as a major opportunity for the U.S. to penetrate the Latin American fighter aircraft combat market. Due to past U.S. decisions to deny requests for high performance aircraft sales to Latin American nations, the French have virtually replaced the U.S. as the primary supplier of fighter aircraft in the region. Based on past evidence, U.S. rejection of the sale would not stop the Venezuelan government from purchasing similar aircraft, possibly the the French Mirage 50, from alternative sources. Moreover, with Venezuela demonstrating a more independent behavior in regional affairs with less regard for the concept of a U.S.-dominated security system or inter-American unity, sale of the F-16s might provide a certain degree of control by the U.S. over use of the aircraft since the transfer would be subject to eligibility requirements under the Arms Export Control Act. Sale by a foreign supplier would not permit such leverage.

8/ U.S. Department of State. Congressional Presentation: Security Assistance Programs, FY 1982. Washington, D.C., April, 1981, p. 481.

An additional factor which appears to be working in favor of the F-16 sale is the financial ability of Venezuela to purchase the aircraft on a cash basis without over-burdening its economy. Venezuela is the wealthiest country in Latin America, with a gross domestic product per capita (GDP/C) of $3,000. The country maintains a well-run and profitable petroleum industry and holds vast reserves of natural resources and minerals. Optimism within Venezuela over the state of its economy has been demonstrated recently by the Herrea Campins government which just embarked on a five-year Sixth National Development Plan. The plan will focus on social goals rather than on industrial development, as past plans have done.

Although the Venezuelan economy seems sound enough to afford the expensive F-16s, certain factors have plagued its finances in recent years and are a potential source of concern. Venezuela suffers from debt service problems, high government spending, high inflation (21 percent in 1980), sluggish oil sales resulting from the world petroleum glut (oil production dipped 8 percent in 1980), and a GDP which showed no growth in real terms last year. 9/ Some critics of the Sixth Plan, including the World Bank, feel that forecasts for increasing oil revenue (which will finance nearly 70 percent of the program) are too optimistic and that goals have been set too high. Venezuelan officials concede that adjustments may have to be made if oil revenues continue to decline. 10/

9/ U.S. Department of Commerce. Foreign Economic Trends and Their Implications for the United States: Venezuela. July 1981, p. 2.

10/ Journal of Commerce. Venezuela: Trade and Investment Survey, August 3, 1981. p. 25.

Arguments Against the Sale

Sale of F-16s to Venezuela would mark a major departure from years of U.S. restraint in selling high performance combat aircraft to the countries of Latin America. This single transaction could match or exceed the total number of U.S.-origin supersonic aircraft transferred to the region through government-to-government channels during the years 1973-1980. Concern exists that the sale could trigger an arms race in Latin America where an inventory of F-16s is viewed as much in terms of prestige as it is in relation to real defense requirements. It is possible that other nations such as Brazil, Argentina, Chile, Peru, or Ecuador would place orders for F-16s in order to keep up with Venezuela and this new level of technology.

Notice of the pending sale has also elicited negative reaction from at least two of Venezuela's neighbors, Guyana and Colombia. Guyana has issued an official protest to the State Department over the sale which comes at a time when Venezuela has stepped up its claim over 65% of Guyana's territory. Relations between Colombia and Venezuela have also been strained over a long-standing maritime boundary dispute and more recently over the influx of illegal Colombian workers into Venezuela. With Colombia also seeking an expanded role in the region, statements from Caracas that it would act as a regional protectorate defending the entire Caribbean area have not been well received in Colombia. Although the government has made no official statements concerning the sale, some Colombian politicians have stated their view that it will foster a regional arms race. The U.S. enjoys close relations with Colombia, particularly in efforts to curb the flow of illicit drugs into the United States, and it is possible that the sale of F-16s could place a strain on this close relationship.

Another concern voiced in connection with the F-16 sale to Venezuela is the possible adverse impact it and other F-16 exports could have on U.S. defense readiness. Many U.S. squadrons designated to be equipped with the F-16 have yet to be supplied and a step-up in sales to foreign buyers could interfere with scheduled deliveries to the Air Force. A shortage of spare-parts currently in the Air Force inventory also causes concern that foreign transfers might have a negative effect on U.S. F-16 support posture. Lieutenant General Kelly Burke, Deputy Chief of Staff, Research, Development, and Acquisition, U.S. Air Force, in a written response to questions posed by the Senate Armed Services Committee in March 1981, stated that "future foreign military sales will not impact the USAF F-16 program providing the sales are negotiated within normal lead time requirements for the aircraft, the support equipment and the required spares. Specifically, a 42-month lead time is required to insure foreign military sales do not impact the USAF." However, the Administration is not adhering to this timetable. James Buckley, Under Secretary of State for Security Assistance, announced before the House Foreign Affairs Committee on September 16, 1981 that the United States would deliver 40 F-16s to Pakistan on an accelerated basis and that the sales "are not expected to result in a significant adverse impact on U.S. capabilities." Although the Administration has not yet announced a delivery schedule for Venezuela, it is likely that Venezuela will now increase pressure for early delivery of its order. This, according some Air Force officials, could pose serious problems in equipping U.S. forces as planned.

The F-16 sale to Venezuela and others might also undermine Administration efforts to promote the concept of an "FX" export fighter aircraft. The FX is designed to have a medium performance capability and to be priced to attract interest among countries whose requirements fall between the capabilities of the F-5E and highly advanced fighters such as the F-16. Since the F-16 is viewed by many nations as a prestige aircraft, several nations may seek it over the more affordable export models such as an F-5G or F-16/79, regardless of their real requirements—if the more advanced aircraft is known to be available. During hearings before the Senate Foreign Relations Committee on July 28, Undersecretary of State James Buckley stated that "middle-range countries with limited dollars to spend could perhaps buy more protection per dollar expended through, let's say an F-5G than through an F-16 because of the kind of infrastructure that is required." 11/ Costs associated with an F-5G are estimated by the contractor to range from $7-9 million while an F-16 carries a $21 million price tag for the aircraft and support equipment. During the same hearing, General Ernest Graves, Director of the Defense Security Assistance Agency, pointed out that it would be far more economical and efficient for countries with current inventories of earlier models of the F-5 to up-grade their forces with the F-5G since much of the supply and infrastructure support necessary is common. 12/ Venezuela has a number of older Canadian-supplied CF-5s while Brazil and Chile also own various F-5 models. If the F-16 is introduced in Latin America through the Venezuela sale, countries making future requests might ignore the option of an "FX" and insist on the more advanced high performance aircraft.

Threat Assessment

Although the Administration has issued no official statement, during the July 28 Senate hearings Mr. Buckley cited "Cuba, what is happening in Grenada and elsewhere in the Caribbean" as comprising a threat to Venezuela. Asked

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11/ Unpublished hearings before the Senate Committee on Foreign Relations, July 28, 1981.

12/ Ibid.

if a similar Cuban threat would prompt further F-16 sales to Brazil, Argentina, Chile, Peru, or Ecuador, Mr. Buckley responded that each country's situation would be evaluated case-by-case and that "Cuba is a long way from Argentina." 13/

However, many analysts consider the Cuban factor to be a weak argument. While the Castro government is supplied with the sophisticated Soviet Mig-23, U.S. interests in the region run so close with countries like Venezuela that it is highly unlikely that the United States would stand by while Cuba attacked a friendly nation in Latin America—particularly a Rio Pact member. Furthermore, Cuba has never engaged in an air war in the Western hemisphere. Former Under Secretary of State for Coordinating Security Assistance Programs, Matthew Nimetz, testifying before the Foreign Relations Committee, agreed that Venezuela had legitimate concerns in protecting its oil fields and keeping the sealanes open and the oil tankers moving. However, Mr. Nimetz argued that if Cuba "gets into fighting people by air, the U.S. is going to be involved; we are not going to count on Venezuela to have an air war with Cuba." 14/ Tensions between Venezuela and its neighbors Guyana and Colombia do not pose an air threat and Venezuela is on good terms with other nations of the region with substantial military capabilities.

Defense Department Role in Promoting the Sale

The extent to which the U.S. Government has promoted the sale of F-16s to Venezuela is nearly impossible to assess. With concerns being raised over diversion of sophisticated aircraft from its own forces, the Air Force has an incentive to discourage foreign requests for these planes. However, questions regarding discussions between the U.S. and Venezuelan Air Forces did arise during the Senate hearings of July 28. Senator Percy posed the

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13/ Ibid.

14/ Ibid.

charge made by some that initial inquiries from Venezuela concerned only the export models F-16/79 and F-5G, and that interest in the front line F-16A only developed when the Air Force convinced Venezuela that it might be available. Assistant Secretary of Defense West considered it natural for all pilots to be proud of their aircraft and maintain a desire to fly the best possible equipment and that some may have promoted the F-16A independent of the Air Force. The decision to provide Venezuela with the specification and pricing information was made by the President, he said. "This was not a decision forced by the Air Force." 15/

15/ Ibid.

B. Prospective U.S. Arms Transfers to Pakistan

Background: Previous Arms Transfer Policy Toward Pakistan

Past U.S. arms transfer policy towards Pakistan has been marked by great volatility. In the 1950s the United States made Pakistan a significant regional military power by providing it with large quantities of surplus arms from the Korean conflict. The United States provided almost $2 billion in economic and military assistance during the period 1953-61, including $408 million in grant military assistance. Among other things, the United States gave Pakistan the first high performance jet aircraft to be introduced into the region, including F-86 Sabres and 12 F-104 interceptors (the F-16 of its day), and hundreds of World War II and Korean War vintage tanks.

The basis for the U.S.-Pakistan military relationship was a 1954 U.S.-Pakistan Mutual Security Agreement, Pakistan's membership in two western alliance systems--the South East Treaty Organization (SEATO) and the Central Treaty Organization (CENTO)—and a 1959 bilateral security agreement between the United States and Pakistan.

A difference in primary goals and perceptions has been a constant feature of U.S.-Pakistan security relations in the past. U.S. military assistance to Pakistan was directed toward an anti-Communist alliance strategy and was seen in part a means of obtaining military bases and intelligence facilities on the Soviet periphery.

For Pakistan, however, membership in SEATO and CENTO, and a U.S.-Pakistan bilateral agreements were intended almost wholly as ways of obtaining external support from a major power in its rivalry with India. From Pakistan's point of view, the threat of Communist aggression was less worrisome.

This difference in perception contained within it the seeds of future disappointments and recriminations. The United States sought to reassure Pakistan concerning U.S. arms supplied to India following the 1962 India-China border war, but never provided an unqualified commitment of support against India.

After the outbreak of the 1962 India-China border conflict the United States provided emergency grant military assistance to India to increase the operational capability of its forces. Between 1962 and 1965 the United States provided approximately $100 million in grants and credits (primarily the former) to help India convert six infantry divisions to mountain divisions, improve its air transport capability and upgrade its radar and communications. The United States also provided India with an excess small arms manufacturing facility valued at $2 million. A 1962 exchange of notes between the United States, Great Britain, and India included a U.S. commitment to set up a chain or radar stations along India's Himalayan border with China.

The major difference in the U.S. arms transfer relationships with Pakistan and India lay in the relative scale of the transfers, the nature of the equipment supplied, and the degree of dependency. Whereas at one point the U.S. had provided 80 percent of Pakistan's military equipment, U.S. arms supplies to India were always a minor component of its total acquisitions.

The first rupture of U.S.-Pakistan ties and the first change in U.S. arms transfer policy occurred during the 1965 Indo-Pakistan war, when the United States cut off arms shipments to both countries. Although the war arose out of an escalating series of border conflicts in which neither side was judged blameless, it was widely believed to have been provoked by Pakistan because it perceived that the regional military balance of power would soon be shifting irreversibly in favor of India.

Thus, while the war itself was generally a military standoff, it was a strategic victory for India in the larger sense. Not only did India retain control of Kashmir, the primary territory in contention, but its greater economic and industrial strength and its ability to rebuild its military forces rapidly made clear that in the long run the United States could not give Pakistan the kind of rough parity that marked the 1954-1962 period.

During 1966-67 the United States evolved a new arms tranfer policy for the South Asia region that lasted, with some exceptions, down to the late 1970s. Essentially the policy was that the United States would sell "non-lethal" military end items on a case-by-case basis (for cash or credit) and replacement parts for "lethal" items on a cash basis only. Subsequently, the policy was modified to permit the sale of ammunition and to allow "critical need" or "stability enhancing" transfers. 16/

In 1970 the United States allowed Pakistan to purchase, on a "one time" basis, 300 Armored Personnel Carriers (APs) and some combat aircraft to replace losses from non-combat attrition. Neither were delivered prior to the outbreak of the 1971 Indo-Pakistan war, at which time a new embargo was imposed.

The embargo imposed during the 1971 war was ended in 1973, and the United States resumed a liatied case-by-case arms transfer policy towards South Asia. Among other things the United States delivered the 300 APCs to Pakistan that had been held up by owing to the outbreak of the 1971 war and

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16/ Cohen, Stephen P. U.S. Weapons and South Asia: A Policy Analysis. Pacific Affairs, Vol. 49, no. 1 (Spring 1976). p. 62. Cohen's article draws heavily on testimony contained in "United States Interests in and Policies Toward South Asia," hearings before the Subcommittee on the Near East and South Asia of the Committee on Foreign Affairs, March 12, 15, 20 and 27, 1973. 93rd Cong., 1st sess. Washington, U.S. Govt. Print. Off., 1973.

other equipment and spares already paid for by Pakistan and held in U.S. warehouses.

Some measure of the change in U.S. arms tranfer policy towards South Asia can be seen in the relevant figures for the periods 1954-65 and 1966-71. During the former period the United States provided Pakistan with $674 million in grant military assistance and India with $95 million. Between 1966 and 1971 total U.S. arms deliveries to both countries—almost entirely for cash or credit—amounted to only about $100 million. During the same period (1966 to 1971) Pakistan's total arms imports were estimated at about $475 million (primarily from China and France) and India's at about $1 billion (primarily from the U.S.S.R. and the U.K.). 17/

U.S. arms transfer policy in South Asia began to change again in the mid-1970s, in part because of renewed concern about Soviet expanion. The decision to limit U.S. arms transfers to the region had been predicated on the assumption that external threats to the region or the likelihood that either the Soviet Union or China could gain a predominant [illegible]ion were low. By the mid-1970s, the American government began to reevaluate the premises that underlay detente with the Soviet Union. In addition, the United States began to take a new interest in the threat of nuclear proliferation in South Asia. Concerns about India's growing dependency on Soviet military technology and Pakistan's apparent drive to acquire a nuclear explosive capability led to a revision in U.S. arms transfer policy. The two main pillars of an evolving new policy were the desire to dissuade Pakistan from its nuclear course by meeting its legitimate conventional military requirements, and a willingness

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17/ U.S. Congress. House. Committee on Foreign Affairs. United States Interests in and Policies Toward South Asia. Hearings before the Subcommittee on the Near East and South Asia, March 12, 15, 20, and 27, 1973. 93rd Cong. 1st Sess. Washington, U.S. Govt. Print. Off., 1973, p. 9-10, 175.

to sell arms to India as it moved to diversify its sources of military equipment and technology.

In February 1975 the United States lifted its ban on sales of "lethal" military equipment to South Asia to permit cash sales on a case-by-case basis. Between 1975 and 1979, the United States transferred TOW anti-tank missiles, Navy destroyers, ammunition, and other lethal equipment to Pakistan. It has also entered into an agreement to sell TOW missiles to India, and is negotiating with India on the sale of artillery and ammunition.

The impact of the change in arms transfer policy can be seen in the data for arms deliveries to Pakistan and India during the three principal phases of U.S. arms transfer policy towards the region. Of particular significance are the rapidly rising FMS and commercial deliveries following the liberalizing of U.S. policy on arms transfers to South Asia in the mid-1970s, which reversed the effect of the previous qualified ban on "lethal" arms deliveries that prevailed from the 1965 India-Pakistan War (FY 66) to about February 1975 (FY 76).

U.S. ARMS TRANSFERS TO INDIA AND PAKISTAN 18/

Deliveries - Fiscal Years 1950-1980
(dollars in thousands)

	India				Pakistan			
FY	FMS	Commercial	MAP	Excess MAP	FMS	Commercial	MAP	Excess MAP
1950-66	54,032	-	83,583	-	33,450	-	650,280	26,827
1967-75	8,193	6,768	5,773	17,642	79,316	7,339	-	-
1976-80	13,561	37,477	892	4,370	211,850	22,223	-	-
Total	75,786	44,244	90,248	22,012	324,615	30,561	650,280	26,827

18/ Department of Defense. Security Assistance Agency (DSAA). Fiscal Year Series, 1980. p. 80-81, 102-103.

Despite the general liberalization of arms transfers to South Asia, certain ambiguities remained regarding U.S. arms transfer policy toward Pakistan. These ambiguities were the result of the dilemma posed by Pakistan's evident pursuit of a nuclear weapons capability, and continuing U.S. reluctance to introduce potentially destabilizing conventional arms into the subcontinent. Thus, in late 1976 the Department of Defense recommended approval for a Pakistani purchase of 110 A-7 combat aircraft (rumored to be financed by Saudi Arabia). The Department of State, however, made known its intention to weigh the matter carefully and without any consideration of urgency, and the issue of the A-7's soon became identified with American displeasure over Pakistan's attempted purchase of a nuclear reprocessing facility from France. Not only was the A-7 sale held in abeyance, but the Ford Administration also threatened Pakistan with the loss of American economic assistance if the agreement with France was consummated. 19/ The Carter administration, in June 1977, decided not to allow the sale. Factors cited in press accounts included the desire to improve relations with India, the political crisis in Pakistan, and the country's potential for acquiring a nuclear capability.

Pakistan's planned purchase of a nuclear fuel reprocessing facility from France, which the United States opposed on anti-proliferation grounds, led to an informal suspension of U.S. economic assistance (including military sales credits), exclusive of food aid, in late 1977. In October 1978,

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19/ Pakistan Bomber Purchase Cleared by Defense Dept. Washington Post, November 16, 1976; U.S. Warning Pakistan on Nuclear Plant. Washington Post, August 9, 1976; Kissinger Meets Pakistani Leader on Nuclear Issue. New York Times, August 9, 1976.

following the cancellation by the French government of the reprocessing facility project, the Carter Administration revoked the aid supension.

Relations with Pakistan deteriorated further in April 1979 when the Carter Administration again terminated U.S. aid to Pakistan as required by Section 669 of the Foreign Assistance Act (known as the Symington Amendment). This provision prohibits the use of appropriated funds for economic or military assistance to any country that supplies or receives nuclear enrichment equipment, materials, or technology without placing it under multilateral management and the safeguard system of the International Atomic Energy Agency. The Administration acted on the basis of information that Pakistan had been covertly pursuing an alternative route to a nuclear explosive capability by secretly acquiring equipment and technology to produce a centrifuge type uranium enrichment plant. The aid cutoff applied both to grant military assistance, which was being phased out world-wide in any event, and to credit sales, but did not apply to cash purchases of military equipment by Pakistan. However, cash sales to Pakistan consisted only of minor items of equipment and spare parts.

Pakistan's potential role in the defense of the Persian Gulf region again came to the fore following the Iranian revolution and the December 1979 Soviet invasion of Afghanistan, and led to a reassessment of U.S. arms export policy. In February 1980 the Carter Administration announced the offer to Pakistan of $400 million equally divided between security and economic assistance, and expressed its willingness to seek temporary congressional relief from the provisions of the Symington amendment. President Zia ul Haq rejected the aid offer as "peanuts" on grounds that it would not meet Pakistan's needs or justify an identification with U.S. policy in the region. Notwithstanding the failure of the aid initiative, the two countries continued to discuss regional security arrangements and the United States contributed substantially to international relief efforts for the growing number of Afghan refugees in Pakistan.

Following the inauguration of President Reagan, the United States made a further shift in its arms transfer policy regarding Pakistan. The Reagan Administration, as did its predecessor, viewed Pakistan as a "front line" state threatened by Soviet expansionism and sought to reincorporate it into the American regional security system in the Persian Gulf region. The Administration not only sought to end the congressional mandated aid cutoff, but also significantly reversed the earlier policy of taking Indian views into consideration in deciding what kind of arms to transfer to Pakistan. The Reagan Administration's view was that the Soviet invasion of Afghanistan and India's own military modernization made earlier concerns about the regional balance no longer relevant. Moreover, the Administration argued that the best chance of influencing Pakistan's nuclear objectives lay in satisfying its legitimate security concerns, rather than in punitive aid cutoffs that had achieved no visible positive result. 20/

During an April 1981 visit to Washington by Agha Shahi, Pakistan's Foreign Minister, the United States and Pakistan reached agreement on the general terms of the new security relationship. On June 15, following a two day visit to Islamabad by Under Secretary of State James L. Buckley, the Department of States announced that agreement with Pakistan had been

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20/ New York Times, June 16, 1981: A-1, A-15; James L. Buckley, Under Secretary of State for Security Assistance, Science and Technology, "Why the U.S. Must Strengthen Pakistan," New York Times (letter), August 5, 1981, A 22.

reached on a $3.0 billion package of economic assistance and military sales credits over the next six years, as well as some presumed funding from Saudi Arabia for the purchase of U.S. arms. As part of the agreement the Administration proposes to make Pakistan the third non-NATO foreign country (after Israel and Egypt) to receive the high performance F-16 fighter. The joint declaration by the United States and Pakistan states that the agreement does not involve any "new alliance" and will not include any base rights for U.S. forces. In explaining what made the current aid offer acceptable, in contrast to that presented by the Carter Administration, Pakistan's Foreign Minister cited the Reagan Administration's willingness to make a longer term and more substantial commitment. [21]

Differing Perspectives Concerning U.S. Arms Transfer Policy and U.S.-Pakistan Security Ties

Ever since the hopes for detente were dimmed by Soviet and Cuban military involvement in revolutionary movements in Africa and Asia during the mid-1970s, U.S. policy makers have been reformulating the premises of U.S.-Soviet relations. The Soviet invasion of Afghanistan, coming on the heels of the Iranian revolution and the taking of U.S. diplomats hostage by radical Islamic militants, tipped the scales in favor of pursuing U.S. interests more actively through a military buildup and a heightened involvement in the security of friendly countries, especially in the vital Persian Gulf region, that were threatened by Soviet expansion. One component of this policy has been an increased emphasis on the use of arms transfers to help build the military power of friendly Third World countries.

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[21] U.S. Department of State. Text of U.S.-Pakistan Joint Communique, June 15, 1981.

Perspectives on arms sales to Pakistan are shaped by contending notions of what matters most to the United States in the bilateral and in regional relationships. Three basic approaches shape the current debate:

1) The first approach is based on the premise that the key issue for U.S. policy is to achieve a strategic consensus among countries threatened by Soviet expansionism in Southwest Asia, and that Pakistan is central to this objective. This is the policy of the Reagan administration, and to a considerable extent, it was the policy of the Carter administration subsequent to the Soviet invasion of Afghanistan. In this view, arms sales are essential both to demonstrate the seriousness of U.S. purpose and to strengthen Pakistan's sense of security and hence, its own will to resist Soviet pressure.

2) The second approach is primarily concerned with regional political and military dynamics, notably the historical rivalry of India and Pakistan. The premise of this approach is that the best guarantee against further Soviet adventurism would be a rapprochment between India and Pakistan, whereas, it is argued, the effect of major U.S. arms transfers to Pakistan will be to fuel the rivalry and ultimately undermine both U.S. and Pakistani security interests.

3) The third approach is based on the premise that the most severe threat to U.S. interests vis-a-vis Pakistan is the possibility of nuclear proliferation. Both to constrain Pakistan's pursuit of a nuclear capability and to demonstrate to other potential nuclear powers the importance of this danger, the U.S. should use arms sales to achieve whatever leverage we can obtain over nuclear efforts. Thus, any arms aid should be tightly

tied to assurances of restraint in nuclear programs. In the absence of such assurances, it is argued, arms sales should continue to be withheld.

Pakistan's relevance to the first approach is readily evident. It borders an area of active fighting in Afghanistan and could become a target of opportunity due to its flanking position on the approaches to the Persian Gulf or a victim of Soviet attempts to eliminate the present sanctuary for Afghan guerrillas. An additional factor is that Pakistan already has close ties with two key regional opponents of Soviet expansion, Saudi Arabia and China.

By the same token, few states better illustrate the potential cost to other U.S. concerns as reflected in the second and third approaches. Proposals for aid to Pakistan raise serious questions regarding nuclear non-proliferation, human rights and the possible consequences of transfering sophisticated arms to unstable region. Pakistan has had three wars with India, and has used U.S. weapons in the last two. It is apparently working to achieve the capability to explode a nuclear device. India, which is itself rapidly modernizing its military forces, has nonetheless strongly criticized Pakistan's impending U.S.-aided rearmament. Pakistan's reviewed security relationship with the United States has been the basis of a noisy pro-bomb press campaign by India's nulcear weapons "hawks."

Factors Concerning Renewed U.S.-Pakistan Security Ties

1) How Serious is the Soviet Threat to Pakistan's Security?

The Soviet occupation of Afghanistan has made Pakistan a potential target of further Soviet expansion or destabilization efforts. Geographically, Pakistan would be less an obvious target of Soviet aspirations towards the Persian Gulf than would neighboring Iran, to the West. Many analysts, however, see Pakistan as a potential target of opportunity due to its internal weaknesses and shortage of modern weaponry. Moreover, Pakistan has already received as many as two million refugees from Afghanistan, and is likely to suffer further economic, social and political disruptions resulting from the Soviet occupation of Afghanistan.

The Soviet invasion of Afghanistan has effectively given Pakistan a border with the U.S.S.R. The 85,000 troops in Afghanistan are not sufficient to control that country let alone overrun Pakistan, but the Soviets have scores of fighter aircraft and attack helicopters based within striking distance of Pakistan, and powerful armor forces that could be deployed through the mountain passes of Pakistan's Northwest Frontier Province or across the open deserts into Baluchistan.

Because Pakistani territory provides an important sanctuary for Afghan guerrillas—with or without Pakistani government support—the danger of preemptive or retributive Soviet raids into Pakistani territory is of concern. Some argue that Pakistan must inevitably become a target of Soviet pressure or attack on this ground alone, as they can never gain unchallenged control of Afghanistan so long as the guerrillas have an external base of operations.

There can be no definitive answer to the degree of threat to Pakistan, as this depends on Soviet intentions and a number of other factors. Some opponents of security assistance to Pakistan question whether the country is really threatened militarily by the Soviet Union's forces in Afghanistan. They stress factors such as the apparent unwillingness of the U.S.S.R. to increase significantly its military presence even in the face of a clear stalemate with the guerrillas, the adverse local political consequences of the Afghanistan invasion, and the presumed opposition of the Soviet Union's regional friend, India, to the destruction of a buffer between itself and the U.S.S.R.

While Pakistan has downplayed the threat in public statements so as not to provoke the Soviet Union, Pakistan's military planners reportedly feel that the risk of Soviet border attacks or incursions is high. Several minor attacks and numerous airspace violations have already occurred. Pakistani officials explain the relatively small adjustments in Pakistan's dispositions thus far on grounds that the threat from India, in their view, cannot be ignored and few military resources are thus far free for reallocation.

2) To What Extent is Pakistan Able to Afford and Absorb U.S. Arms?

Because of the relative backwardness of its economy and industrial base Pakistan has always been heavily dependent on external financing for its arms purchases. Since the United States effectively ended its grant military assistance program for Pakistan in the mid-1960s, and especially since the post-1973 increases in petroleum prices cost has been a major factor in Pakistan's arms purchase decisions. Pakistan's limited purchases of western arms in the past ten years have centered on a few critical areas where high technology is important. Thus, key purchases have been French Mirage III and Mirage 5 aircraft, French surface to air missiles, U.S. and French air-to-air missiles and U.S. TOW anti-tank missiles. Pakistan has been a large beneficiary of grant military assistance from China, and has met most of its requirements for lesser defense technology from that country. Recently, however, China announced its decision to terminate grant military assistance and to export arms for cash or credit only.

With a gross national product of about $23 billion in fiscal year 1979-80, a per capita income of under $250 per year, and a heavy balance of trade deficit, Pakistan is ill able to afford a major military modernization program. During 1979-80 Pakistan imported goods and services valued at about $4.7 billion versus about $2.4 billion in exports. Its total external financial situation was only brought into balance by heavy infusions of foreign assistance from sources such as the World Bank, the International Monetary Fund, and remittances of about $1.7 billion from Pakistani's working in the Persian Gulf region and elsewhere.

The defense journal Strategy Week reported on July 20-26, 1981, that Pakistan's budget for the coming fiscal year envisioned a 16 percent rise in defense spending, and that defense outlays would absorb about 48 percent of current central government expenditures. Given its weak economy and continuing balance of trade difficulties, Pakistan cannot pay for a major military modernization from its own resources. Thus, the main object of its policy since the 1979 Soviet invasion of Afghanistan has been to obtain foreign funding--preferably from the United States and Saudi Arabia--for its military modernization.

There are serious questions about Pakistan's ability even to repay arms credits. Pakistan's external debt now totals more than $10 billion, and its debt service obligations of several hundred million dollars annually continue to rise. In January 1981 Pakistan's major aid donors agreed to reschedule 90 percent of the country's official bilateral concessional debt for the next 18 months. Earlier, the International Monetary Fund (IMF) approved a $1.6 billion loan designed to "promote economic growth in a stable financial environment." 22/

22/ Asian Wall Street Journal, November 27, 1980.

Pakistan's ability to absorb a major infusion of military hardware is a different matter entirely. Pakistan has nearly five hundred thousand men under arms, about one-half as many as India and about the same number as West Germany. Pakistan's forces are experienced and well led. Pakistani forces are involved in training a number of Persian Gulf armies, and Pakistani airmen reportedly fly combat aircraft under contract for several air forces in the region.

Knowledgeable U.S. officials give the Pakistanis high marks for their ability to handle and maintain sophisticated weapons systems although they note weaknesses in their logistical and command-control-and communications systems. Pakistan has recently acquired a capability to overhaul and rebuild its Mirage fighter aircraft, but its possible that the acquisition of an aircraft as sophisticated as the F-16 could strain the ability of Pakistani military and civilian technicians to master modern technology.

3) What Other Factors May Have a Bearing on U.S. Arms Transfer Policy Towards Pakistan?

International Political Factors

Pakistan's immediate security concerns differ somewhat from those of the United States. The United States has viewed the Soviet invasion as a threat to vital U.S. interests in the Persian Gulf and has reacted by seeking to build up countervailing military power in the Indian Ocean and the Gulf and to enter into security arrangements with littoral countries that would better enable the United States to defend against Soviet attack or to project power in support of U.S. interests.

Some in the United States—including former Secretary of State Henry Kissinger and, reportedly, some Department of Defense officials—have favored U.S. acquisition of logistical facilities or a U.S. presence in Pakistan via a military training and support relationship. Other proponents of aid to Pakistan argue that such aid could provide the U.S. a channel to funnel military aid to the Afghan resistance forces, either to influence a Soviet military withdrawal or to raise the costs of a continued occupation.

Pakistan does not share all of these U.S. interests, and its own goals differ in several respects. Pakistan has been publicly critical of U.S. policy in the Middle East an in less than enthusiastic about some aspects of U.S. security policy in the Persian Gulf region, including the creation of the Rapid Deployment Force.

With regard to Afghanistan, Pakistan's apparent objectives are to defuse the threat via some kind of political settlement based on a Soviet withdrawal, (a goal which the United States also supports) and thereby reduce the military threat and permit the return of the refugees to Afghanistan. To this end Pakistan has been an active participant in efforts by the United Nations General Assembly and the Islamic Foreign Ministers Conferences to build internationl political opposition to Soviet policy. Analysis of options for American-Pakistani security relationship must consider the possibility that Pakistan might find it necessary to reach a settlement with the U.S.S.R. that would be adverse to U.S. interests.

Pakistan has repeatedly disavowed any intention of granting base rights or entering into an alliance-like relationship with the United States, and has rejected, in public statements, at least, the possibility that it would become a conduit for arms aid to the Afghan guerrillas. This position was reiterated in the June 15 communique. There are conflicting reports regarding the degree to which Pakistan may be facilitating the flow of outside arms to the Afghan guerrillas. This is a sensitive issue and Pakistan's stated position is what would be expected regardless of its actual role. 23/

Pakistan's Internal Stability

Pakistan is a country that has not yet resolved the problem of political legitimacy and the peaceful transfer of power. Over the years it has alternated between civilian rule and military governments. Due to the long association with British India the appeal of democratic institutions remains a powerful one, but one that has been honored primarily in the breach.

General Zia ul-Haq took power in a military coup in 1977. He promised new elections in 90 days but never carried them out. In December 1978 the previous civilian prime minister, Zulfikar Ali Bhutto, was convicted of having ordered an assassination attempt on a political opponent during which another person was killed. In April 1979 he was hanged despite the appeals of Pakistan's friends, including the United States, China, Britain, and Saudi Arabia.

President Zia is not thought to be popular by western analysts and has had little success in attempting to draft members of the center and right parties into his administration and thereby give it a broader base and more of a civilian coloration. His main civilian support comes from the fundamentalist Jamiat-i-Islami and from the Muslim clergy. However, the clergy in predominantly Sunni Pakistani, through a political force of considerable power, does not have the power or influence of their counterparts in Shi'a Iran.

23/ Pakistan officially denies providing anything but humanitarian aid to the refugees. However, a recent article by Carl Bernstein in the New Republic (July 18, 1981), stated that Pakistan is deeply involved along with the United States, China, Saudi Arabia and Egypt in supplying arms to Afghan resistance forces.

Always leftist/populist in orientation, the Pakistan Peoples Party (PPP) by the harsh treatment meted out to Bhutto and the systematic arrests and intimidation of the party leadership. Outside the PPP there is little organized opposition to the government, as most of the other participants in the abortive nine-party Movement for the Restoration of Democracy have only limited ideological or regional appeals. It is commonly assumed by most western analysts that if free elections were held in Pakistan in the near term the PPP would win.

Most experts on Pakistani politics see the situation as potentially volatile, but few see any near term end to military rule unless a major cataclysm or economic failure occurs. If change takes place, most see the replacement of President Zia by another military figure as the most likely development. A less likely development could be a coup organized in the lower echelons of the military. One reason why the military took power in 1977 was concern that the lower ranks would rebel against the ongoing repression of anti-Bhutto forces. Such a threat could again emerge in the face of a popular uprising against the current government.

Some analysts maintain that U.S. military support of Pakistan over the years has tended to reinforce the political power of the military, while others attribute the course or Pakistan's political development almost entirely to internal factors. The present government of President Zia may see the establishment of a military supply relationship with the United States, and in particular, the acquisition of the F-16 fighter, as reinforcing its political position and satisfying the interests of the military commanders. At the same time, the perception of close ties with the United States and Pakistani support for U.S. security policy in the Persian Gulf region could well become the rallying point for leftist or Islamic fundamentalist opposition. Undoubtedly, this is one reason why Foreign Minister Agha Shahi and President Zia have constantly stressed Pakistan's commitment to non-alignment and the Islamic movement.

U.S. Governmental or Bureaucratic Interests in a Renewed Military Supply Relationship with Pakistan

The Reagan Administration's decision to shift U.S. foreign policy priorities by downgrading nuclear proliferation concerns and promoting arms transfer to Pakistan originated at the highest policy level and stemmed directly from the Soviet invasion of Afghanistan. The policy also seems to be derived from a growing literature emanating from defense and foreign policy specialists long associated with the view that combating Soviet expansionism should be the prime goal of U.S. foreign policy.

In short, there is little evidence that the policy towards Paksitan has any basis in parochial Department of Defense or military department interests. On the contrary, while the DOD has evidenced no opposition to the policy both the DOD and the Air Force have, reportedly, expressed concern about the impact of the F-16 sale on Air Force acquisition schedules. While military survey teams have accompanied several high level missions to Pakistan, there is no evidence that they have played any special role in influencing Pakistan's list of desired weapons acquisitions. If anything, DOD representatives seem to have emphasized the need to "put the cart before the horse," and stressed the need to correct basic logistical and command, control and communications weaknesses, before acquiring expensive advanced weapons systems.

Because of the curious nature of U.S.-Pakistan negotiations since the Soviet invasion of Afghanistan, the appearance has been one of the United States pressuring Pakistan to enter into a new military supply relationship, and being met with obstinacy/resistance on the part of Pakistan.

C. Prospective U.S. Arms Transfers to the People's Republic of China

U.S.-China security ties have represented a vaguely defined aspect of American foreign policy since the start of the Sino-American rapprochement during President Nixon's visit to China ten years ago. The Reagan Administration has thus far followed the pattern of past administrations in avoiding lengthy public explanations of the extent of Sino-American security cooperation or their possible implications, thereby leaving the policy publicly ambiguous. A heavy veil of secrecy has continued to surround U.S.-China negotiations on strategic and other matters.

As a result, the Administration's policy justification and threat assessment regarding its new willingness to sell weapons to China remain unclear. These may become more clear once the Chinese and the United States agree on the U.S. weapons and weapons-related technology that are to be sold to China.

Available public information and confidential interviews with officials in the current and previous administrations show that officials have strikingly diverse views as to why the United States should or should not sell arms to China, and the likely costs and benefits of such policies. These views are reviewed in a separate section below. The officials do agree on some points, however. Most notably, they are in general accord that because of China's limited ability to absorb rapidly or pay for foreign weapons, the PRC is likely to be quite selective in what it decides to buy from the United States. China has focused on obtaining the capacity to produce such sophisticated equipment as fighter aircraft engines and radars, and air-to-air, surface-to-air, and anti-armor missiles. This accords with the views of many Western analysts who have stressed China's need for all-weather fighter aircraft, greater defense capabilities against Soviet armor, and greater ability to provide air cover in nearby waters.

While the Reagan Administration and previous administrations have not defined the primary strategic rationale for supplying U.S. arms to China, there appear to be other, and perhaps more important, reasons than helping "other free and independent countries" 24/ meet legitimate self-defense requirements, providing a political reward to a cooperative regime, or improving U.S. balance of payments. Another element of the underlying strategy might involve pragmatic balance-of-power relations: helping the enemies of our enemies.

There have been exchanges of visits in recent years between Chinese military officials and U.S. counterparts in which arms and weapons-related technology were reportedly discussed. The transcripts of these sessions, as with most other negotiations between U.S. and Chinese officials over the past decade, are very tightly held within the executive branch; their import remains unclear to the American public. As a result, it is difficult to determine even in a general way to what extent the Department of Defense or State has been pushing specific arms for sale to China.

Advantages and Disadvantages of U.S. Military Sales to China 25/

Pro: Some of the strongest arguments in favor of increased U.S. military transfers to China center on the effect they would have on Chinese and Soviet strategic planning. U.S. military transfers to China, it is

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24/ Arms Export Control Act, section 1. 22 USC 2751.

25/ For more information, see CRS Report No. 81-121 F, Increased Military Sales to China: Arguments and Alternatives. May 20, 1981. 59 p. Information for this section is based primarily on confidential interviews with U.S. officials familiar with issues in U.S.-China military relations.

asserted, would further insure that China would remain on the American side against the USSR during the period of U.S. strategic vulnerability in the years ahead. The transfers would also serve to consolidate American ties with what is viewed as the emerging great power in Asia—China. A few military planners point out that the U.S. military moves will help pave the the way to what they see as a desirable and necessary Sino-American mutual security arrangement in Northeast Asia—an alliance system that they judge should also include Japan. 26/

The U.S. military support relationship would increase China's sense of security vis-a-vis the Soviet Union and reduce the chance that the USSR would be able to intimidate or otherwise pressure China into a more pro-Soviet foreign policy stance. A greater Chinese sense of security is said to be necessary before the United States can expect the PRC to join in serious discussions on limiting nuclear arms development.

While the U.S. transfers are not seen as substantially altering China's ability to project power against the USSR, a number of analysts have said that such transfers could seriously complicate Soviet military plans in Asia. Moscow would have to devote more resources to countering whatever limited improvements are made in Chinese forces, which could be a critical diversion in the event of an East-West confrontation over Europe or the Middle East. Some analysts worry about the Soviet Union redeploying forces from East to West in the event of a crisis in Europe. They add that such redeployments would be less likely under circumstances of closer Sino-American military cooperation. Closer military cooperation with China might also

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26/ These analysts are predictably vague in defining the outlines of this proposed mutual security arrangement, although they repeatedly compare it directly with the North Atlantic alliance.

give the United States the option of using facilities in China (air fields, ports, etc.) in the event of a major confrontation with the USSR, thereby placing Soviet Central Asia and the Far East under greater pressure than at present.

Another strategic advantage seen by a few analysts relates to Japan. Noting U.S. frustration with the slowness of the Japanese defense development and the seeming inability of the United States effectively to pressure Japan on this issue for fear of alienating our most important ally in Asia, these observers stress that closer military ties with China could help in these areas. They could allow the United States more latitude in pressuring the Japanese to do more in defense against the USSR, as well as in other areas, and could increase to some degree Japan's sense of vulnerability. This feeling of vulnerability is described as the most important element in influencing Japan to give defense a higher priority.

Perhaps the strongest political argument for going ahead with limited military transfers to China is that U.S. leaders have already given Chinese officials the impression that they would do so. To reverse course at this stage could lead to serious complications in Sino-American relations. Some advocates say the transfers would show American "good faith," build support for and establish American influence with the relatively pragmatic leaders currently governing China, and promote important channels of communications with segments of the Chinese military leadership who might otherwise remain skeptical of China's recent tilt toward the United States. 27/ It is asserted

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27/ It has been noted by some that Chinese military leaders have received less benefit than other PRC leaders from China's modernization program or its opening to the West; they therefore would have less to lose, and possibly more to gain, if that program and China's pragmatic, relatively pro-Western leadership were changed.

that preparing such a solid foundation for Sino-American ties is essential in order to permit the relationship to withstand future difficulties over such issues as Taiwan, 28/ U.S.-Soviet arms control, and human rights.

Military transfers to China are also said to provide the United States with a "China card" useful in promoting more positive Soviet behavior toward the United States or in compensating the United States for Soviet gains made elsewhere in the Third World. They reportedly have indirect advantages for U.S. trade with China, as China is said to be likely to give business people associated with its major military backer more advantageous treatment than their competitors from other countries. 29/ Closer military ties with China could reduce U.S. dependency on Japan and increase U.S. leverage over the Japanese on a variety of issues, including U.S.-Japanese trade disagreements. 30/

Con: Opponents of U.S.-China military cooperation point to a variety of strategic disadvantages they see associated with U.S.-China military ties. For one thing, China's current nuclear strategic capability is potentially

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28/ It is said that the United States cannot expect relations with China to remain cordial if it continues—as expected—to sell hundreds of millions of dollars worth of military equipment to Taiwan while maintaining a de facto arms embargo against the PRC. In particular, some say that the United States could avoid a downturn in U.S.-China relations and still go ahead with the proposed sale of the FX fighter aircraft to Taiwan by simultaneously allowing the transfer to China of sophisticated U.S. aircraft engine technology needed for the PRC fighter aircraft program.

29/ One China specialist went further in this regard, asserting that China gives better treatment and more advantageous trade to those individual American companies which have been most helpful in promoting U.S. military transfers to China.

30/ A few observers have claimed that Japan's leaders have been privately arguing against U.S. arms sales to China in part for selfish reasons. The Japanese allegedly judge that if the United States moves ahead with such sales, China will favor U.S. businessmen over Japanese businessmen on potentially lucrative trade deals.

threatening to the United States, and U.S. aid to China's conventional forces could presumably allow the PRC to devote more attention to developing strategic weapons. China is said to be likely over the longer term to pose a threat to U.S. and allied interests in Asia. As it gets stronger through U.S. support, China may well act more independently and assertively and come into conflict with some of its neighbors whose interests are close to those of the United States. Taiwan is the most obvious area for such conflict, 31/ but China might also generate conflict with Japan, Korea, Indo-China, or South Asia.

Closer military cooperation with China could lead to such negative consequences as even more Soviet military pressure on China 32/ or perhaps a punitive Soviet strike along the Chinese border. While a few analysts see Moscow as possibly reacting immediately with force to U.S. sales to China, others stress that Soviet military planners have not been rash in their military actions against China. Several have added that U.S. military cooperation could quickly build to a point where it would cross an ill-defined "threshold" of Soviet tolerance, leading to a harsh military response against China, and possibly, the United States.

31/ U.S. military transfers to China might so increase China's perceived leverage in Asia that Peking might take more forceful actions—such as a naval blockade—against the island. U.S. arms are not thought to increase substantially the PRC ability to conduct such an operation, at least for several years. But the transfers could signal Peking, Taiwan and Taiwan's leading trading partners of a shift in U.S. priorities in the region, suggesting that the United States would not react strongly to such a PRC resort to force against the island. In the event of a PRC blockade—which is thought by many to be within the range of China's current military capabilities—the United States would have to decide whether to confront its strategically important friend in Asia or allow Taiwan to be pressured into an accommodation with the mainland.

32/ Some analysts would welcome an increase in Soviet deployments against China because they would reduce Soviet ability to confront the West elsewhere.

Increased Soviet antagonism short of armed conflict could undercut the relatively pro-Western leadership of China and discredit those Chinese officials who have linked China's defensive strategy to close association with the United States. Some China specialists argue that China is unlikely to change its anti-Soviet posture and will continue to tie down Soviet forces, whether or not the United States increases military transfers to the PRC. They therefore see little need for the United States to risk the possible disavantages of closer U.S.-China military ties.

The USSR could react to U.S. transfers of military supplies to China with countermeasures involving Vietnam or possibly India, perhaps including stepped up efforts to establish Soviet military installations in Southeast and South Asia. These moves not only would help the USSR to encircle China and curb Chinese influence in Asia, but they would also seriously challenge the ability of the United States to defend sea lines of communications in these important areas. U.S. arms sales to China could create regional instability by increasing China's assertiveness, or by stimulating arms' competition between China and its neighbors: the Soviet Union, Vietnam, Japan and India.

U.S. moves toward military ties with China could also seriously dampen Soviet interest in arms control with the United States and upset existing East-West understandings for the negotiations. In particular, Moscow would be more likely to demand compensation in any disarmament proposal due to Chinese nuclear forces--something the United States has rejected in the past.

Opponents of military transfers also raise a host of possible political and economic disadvantages to such ties. Arms sales could lock the United States into an anti-Soviet posture in international affairs at a time when the United States may have more to gain from cooperation than confrontation with the USSR. This could happen even if the United States established only a limited military relationship with the PRC, because such relationships, once started, develop rapidly and prove difficult to stop.

The transfers could link the United States closely with the Chinese side of the Sino-Soviet dispute in Asia, notably reducing prospects for more independent U.S. policies vis-a-vis Vietnam or India. They could promote a view that the United States perceived China, rather than Japan, as its main ally in Asia, thereby leading to an erosion of the U.S.- Japan alliance. They could signal a loss of U.S. influence in Asia, as well as a loss in influence over China's future behavior. The latter would be even more likely if the United States agreed to coproduction-type arrangements with China that would allow the Chinese to have full control over the use of weapons produced with technology supplied by the United States. Even without coproduction agreements, it is likely that China will begin to copy many of the items sold by the United States. Some analysts claim that Chinese leaders lack a fixed and viable defense strategy and that U.S. military supplies could prove to be less than fully useful if Chinese defense plans changed in the future. Chinese leaders might then be inclined to blame the United States for transferring "inappropriate" equipment at great cost to China's limited economic resources. Even some analysts who favor arms transfers to China argue that such sales should be seen only as a supplement to, not a substitute for, U.S. power in the region. However, others favoring Sino-American security ties emphasize that the United States needs to consolidate its forces in order to deal with the USSR in other important areas, notably the Persian Gulf, and that it should use China as a strategic bulwark in East Asia. Some note that the United States in effect has already started this kind of approach in Southeast Asia, where China--and not the United States--is seen as the main strategic guarantor of American interests in Thailand against military pressure from Soviet-backed Vietnam.

In view of China's history of political instability, it is quite possible that a new leadership less favorable to the United States could emerge in China over the next few years. The example of Soviet military cooperation with China in the 1950s is also not reassuring, as it seemed to prompt unrealistic Chinese expectations which the USSR was unwilling to fulfill. This led to a serious downturn in relations--a pattern which could be followed in Sino-American relations during the 1980's if the Chinese army leaders and other Chinese officials come to rely too heavily on American supplies and support.

China is seen by some analysts as gaining much more than it gives in its new relationship with the United States. Some stress the contrast between the risks the United States would take in increasing military ties with China and the fact that America would still have no guarantee that China would be any more likely to cooperate with the United States on important strategic or regional issues.

V. POLICY OVERVIEW

In practice the Reagan arms transfer policy may prove to be less distinct from the Carter policy than the two policy statements would indicate. The Carter Administration did not drastically reduce U.S. transfers, and the Reagan Administration has stated it does not expect to increase transfers drastically. Both policies were designed to regulate arms traffic while achieving the maximum benefits for U.S. national interests. President Carter emphasized the principles of arms control and restrained arms trade in pursuit of world peace and national security. He and the Congress also attempted to instill greater respect for human dignity and basic human rights by prohibiting arms transfers to governments that grievously repressed their people. President Reagan has placed greater emphasis on preserving peace and freedom from "totalitarian" repression by enhancing the capabilities of friendly -- including some "authoritarian" -- states to deter or repel aggression.

Both the Carter and Reagan arms transfer policies appear at this time to fall near the center of a wide range of policy options. Political realities and U.S. interests probably foreclose the extreme options for U.S. arms transfers. Neither a total embargo on arms exports nor an unrestricted policy that allowed any transfer to any country is feasible. There remains a wide variety of approaches to the regulation of U.S. arms exports. These will be summarized below.

Flexibility: A policy can consist of fixed rules that will govern all proposed arms transfers; general guidelines that provide direction but allow some flexibility; or an ad hoc approach to each proposed transfer.

Weapons Category Restrictions: Numerous factors have been suggested for establishing which arms transfers should be mostly closely controlled, such as the cost of the weapon; the research and development costs; the most probable use of the weapon (offensive or defensive, tactical or strategic, against an external threat or an internal threat); the inherent lethality of the item; the sophistication of the system; the significance of the system to the client; the sensitivity of the item (weapons that could be especially useful to terrorist groups or repressive government security forces, napalm, chemical munitions, or other extremely destructive but indiscriminate weapons); and whether an item is a weapon, a weapons-related item (bomb sight, missile guidance radar), or a military support item or service (truck, tent, construction project).

Sophistication: The United States may choose to transfer its most advanced weapons systems to its allies and friends; it can transfer weapons of the highest level of sophistication that the recipient nation can operate and maintain; it could transfer items only of a level of sophistication that had already been introduced into a particular region; or it could provide only medium or low level military technology to certain countries.

Costs: The United States can use arms sales to improve its balance of payments position, reduce unit costs of U.S. defense equipment, and enhance U.S. defense production capabilities and efficiency by selling large numbers of expensive items. Alternatively, the United States can consider the defense needs and the economic conditions of recipient countries and encourage them to purchase less espensive items; or the United States can prohibit sales of expensive defense equipment to developing nations that can not afford such expenditures.

Country Category Restrictions: Transfer decisions can be made on the grounds of whether a proposed client is an ally, friend, neutral, or adversary; whether it is communist, socialist, totalitarian, authoritarian, or democratic; whether it is threatened or threatening.

Regional Restrictions: Because of the quantity and quality of weapons already in a region, different rules may be applied to U.S. arms transfers to Europe, the Middle East, Asia, Africa, and Latin America.

Political-Military Situation: Decisions have traditionally been influenced by whether a country is subject to an external communist threat or a threat from a U.S. friend or neutral nation; and whether or not an internal threat is communist sponsored or supported. Verification by U.S. or international officials of the external aggression or the internal or external threat may be required.

Linkage: U.S. arms transfers can be linked to other U.S. foreign policy interests such as the international activities or the domestic practices of the client state.

International Cooperation: The United States can exercise its restrictions unilaterally, bilaterally, or multilaterally. In cooperative efforts, it can focus its negotiations on principal supplier nations or principal buyers. It can deal with individual countries, regional groups, or worldwide groups. It can follow the model of COCOM (Coordinating Committee) whereby the NATO countries (except Iceland) and Japan cooperate in restricting arms transfers to communist countries, or it could follow the International Atomic Energy Agency model whereby an affiliate of the United Nations monitors the transfer of nuclear materials and technology. The U.S.-Soviet Conventional Arms Transfer talks offer another model for international negotiation. Regional negotiations designed to reduce military or political tensions or control nuclear or conventional force levels (such as the Camp David talks, the Mutual and Balanced Force Reduction talks, or the Tlatelolco Treaty for Prohibition of Nuclear Weapons in

Latin America) offer another means of indirectly reducing military transfers and military expenditures. When the perceived threat from neighboring nations can be reduced through negotiation, additional military supplies may be less necessary.

Ceilings: The United States could establish a ceiling on its total volume of arms transfers either in terms of dollar value or in numbers of items (numbers of tanks, jet fighter aircraft, etc.). A ceiling could also be placed on transfers to specific countries or regions.

Transfers with Strings: The United States could condition future transfers on the particular use of the equipment by a client or even on the client's participation in some form of arms traffic restraint system. The United States could approve transfers only when U.S. personnel are allowed to monitor the use of the weapons. It can also maintain some control of the weapons use by withholding the technology to produce or even to repair the weapons or by withholding a sufficient supply of spare parts, ammunition, or some operational component so that the client could not employ the weapon without U.S. support.

Central or Shared Control: Arms export controls can be exercised by the White House, the Department of State, Defense, or Commerce, or by some inter-agency group. Controls can also be shared between the executive and legislative branches.

A well balanced arms transfer policy will draw on several of these approaches to the problem. Probably no single approach would suffice. For the first two decades following World War II, the United States used grant military assistance programs (MAP) to rebuild the military power of its traditional allies and to build forces of an emerging alliance system surrounding Europe and Asia. In the mid-1960s, the Foreign Military Sales (FMS) program gained dominance as MAP declined. After the oil embargo of 1973, foreign military sales grew dramatically, especially those to Iran and Saudi Arabia. More sophisticated equipment was transferred on a cash basis. Congress and a large number of journalists and public interest groups became concerned with the volume and rapid growth of U.S. arms sales in the early 1970s, and several legislative provisions were enacted to regulate these sales. The Carter Administration followed that trend, restricting the volume, sophistication, and costs of military equipment it would sell to developing countries. It also emphasized the linkage between arms sales and the observation of human rights in client states. Policy statements by the Reagan Administration indicate an intent to relax many of the constraints imposed on arms transfers in the last decade. The new Administration will apparently emphasize the use of arms transfers to enhance the military capabilities of friendly nations and defense production of the United States within the bounds of existing laws.

ANNEX C

HISTORY OF INTERNATIONAL EFFORTS TO CONTROL CONVENTIONAL ARMS TRANSFERS SINCE WORLD WAR II

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Reproduced from U.S. Arms Control and Disarmament Agency. The International transfer of conventional arms; a report to the Congress. Washington, U.S. Govt. Print. Off., 1974. p. C3–C55.

ARMS REGISTRATION

Maltese Draft Resolution, 1965

In the First Committee of the General Assembly, Maltese Ambassador Pardo introduced a draft resolution on November 30, 1965, requesting the Eighteen Nation Disarmament Committee (ENDC)[1] to examine the question of arms transfers between states, and to submit to the next General Assembly proposals for the establishment through the United Nations of a system of publicity on sales and transfers of arms.[2]

Recalling that the League of Nations had published an annual yearbook on the arms trade, Ambassador Pardo argued that (1) large expenditures on armaments by developing countries were made possible only by arms and/or subsidies from abroad, (2) an effective system of publicity would help assuage suspicions of neighboring countries and thus relax international tensions, and (3) reliable information on the arms traffic might enable the Secretary-General to bring impending international crises to the attention of the Security Council in time to avert armed conflicts.[3]

There was very little discussion of the Maltese resolution in the First Committee. The Soviet Union and its allies offered no comment. ACDA Director Foster stated that the problem posed by regional arms races in conventional weapons was serious. But he believed that publicity would not discourage arms sales or transfers or provide warning of dangerous buildups. He said that the United States would, however, welcome regional initiatives, including some variant of the Maltese proposal.[4]

Peru, Nepal, and Libya supported the Maltese proposal, but Saudi Arabian Ambassador Baroody said that Pardo was "unwittingly suggesting" that small nations should be prohibited from acquiring arms and ammunition. He thought that the resolution should urge:

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[1] Became the Conference of the Committee on Disarmament (CCD) in 1969 after the addition of 8 new members.

[2] Documents on Disarmament, 1965, p. 568.

[3] Ibid., pp. 600-604.

[4] Ibid., pp. 621-622.

> ...all States manufacturing arms and ammunition to submit to the Secretary-General a full report about the arms production in their countries including a list of quantities intended for export.

He was concerned that implementation of the Maltese proposal might "like the League's yearbooks...stop national movements in the colonial territories."[1]

On December 2, the Maltese proposal was rejected by 19 votes to 18, with 39 abstentions, including the United States. The Soviet Union and its allies voted against the resolution, while the United Kingdom, New Zealand, several Latin American states, Libya, Nigeria, and Togo voted in favor. The United Kingdom explained that it had voted for the resolution in order to express a desire for further examination of the matter.[2]

The Johnson Proposal for the Middle East, 1967

On June 19, 1967, shortly after the Arab-Israeli conflict, President Johnson outlined five principles for peace in the Middle East. These included a proposal that the United Nations "immediately call upon all its members to report all shipments" of arms into the area and "keep those shipments on file for all the peoples of the world to observe."[3] At a special session of the General Assembly on the following day, Ambassador Goldberg submitted a draft resolution which proposed the achievement of "a stable and durable peace" in the area "through negotiated arrangements" on the basis of President Johnson's five principles, including "registration and limitation of arms shipments into the area."[4]

The Soviet Union had introduced a draft resolution which condemned Israeli actions and demanded the withdrawal of Israeli forces. Together with its allies and the Arab states, the Soviet Union strongly opposed the U.S. draft resolution. Since the major Western states showed little enthusiasm, the United States decided not to press the resolution to a vote. It gave its support instead to a draft proposal supported by 19 Latin American states.[1] Ambassador Goldberg expressed regret, however, that the Latin American proposal did not refer to the need to end the arms race in the Middle East. He emphasized that the United States remained interested in exploring a system of registration and limitation of arms shipments into the area.[2]

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[1] U.N. doc. A/C.1/PV.1393, pp. 57-66.

[2] A/C.1/PV.1394, p. 106.

[3] Documents on Disarmament, 1967, p. 264.

[4] A/L.520, June 20, 1967.

In the ENDC, support for the Johnson proposal came from Canada. Stressing the urgency of the arms traffic problem, the Canadian representative stated on July 6 that his government followed a general policy of withholding armaments to regions where there were tensions "imminently dangerous to peace." He thought that the proposal to register and publicize the transfer of arms in the Middle East should be made applicable to other regions as well. Recalling the Maltese resolution, he expressed an interest in hearing other ENDC members' views on the matter.[3] Nigeria said that the Canadian idea was "laudable," but no other ENDC member responded.[4]

When the UAR took the Middle East question back to the Security Council on November 7, the United States immediately submitted a draft resolution incorporating the five Johnson points, including a reference to the need to limit "the wasteful and destructive arms race in the area." The Soviet Union followed suit on November 22 with a draft resolution urging both sides to limit their "useless and destructive arms race," but it made clear that this provision was tied to another--one which called for immediate withdrawal of the forces of both sides to the positions they had held before June 5, 1967. The Soviet Union also complained about renewed American arms deliveries to Israel. However, the question of arms shipments received scant attention during the Security Council debate, and both the United States and the USSR decided not to press their drafts to a vote. The U.S. representative supported a U.K. draft resolution which he considered to be consistent with the Johnson principles, although it did not mention the arms race.

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[1] A/L.523/Add.1 and 2, July 4, 1967. The vote on the Latin American resolution (July 4) was 57 to 43, with 20 abstentions. It failed to obtain the required two-thirds majority; see Annual Report of the Secretary-General on the Work of the Organization, 16 June 1967-15 June 1968 (General Assembly Official Records: Twenty-third Session, Supplement No. 1 /A/7201/), pp. 1-7.

[2] A/PV.1546, pp. 11-12.

[3] ENDC/PV.311, pp. 4-10.

[4] For the Nigerian comments, see below, p. C-35.

The Security Council unanimously adopted the U.K. resolution on November 22. The U.S. representative said that he would have proposed an amendment on the need to limit the Middle East arms race if the resolution had not been so delicately balanced. He had been encouraged by the arms limitations provision in the Soviet draft and did not consider that the mandate of the U.N. Special Representative excluded him from exploring this. The Soviet resolution was not voted on.[1]

The Danish Draft Resolution of 1968

Denmark, Iceland, Malta, and Norway jointly submitted a draft resolution at the General Assembly by which it would request the Secretary-General to ascertain the views of member governments on the following: (1) registration with the Secretary-General of "all imports and exports of conventional arms, ammunition, and implements of war," and (2) collection and publication by the Secretary-General at regular intervals of information on transfers of such materials.[2] The draft resolution was introduced in the First Committee on November 22 by the Danish representative who explained that his proposal was aimed at discouraging purchases of unnecessary armaments.[3]

The U.S. representative observed that the proposal gave governments "an opportunity to give serious thought to and make known their views" on arms transfers.[4] The Netherlands representative supported the resolution as a first step in checking the "unbridled traffic in non-nuclear weapons." He also favored "restrictive arrangements between supplier States and/or arrangements between the receiving countries in particular areas."[5]

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[1] Report of the Security Council, 16 July 1967-15 July 1968; General Assembly *Official Records: Twenty-third Session, Supplement No. 2* (A/7202), pp. 13-23.

[2] *Documents on Disarmament, 1968*, p. 728.

[3] *Ibid.*, pp. 728-732.

[4] *Ibid.*, p. 772.

[5] A/C.1/PV.1617, p. 7.

Strong opposition to the proposal came from a number of developing countries such as Argentina, India, Indonesia, Pakistan, Saudi Arabia, Syria, and the UAR (Egypt), which opposed registration of arms. India was particularly vehement in its opposition. It charged that the proposal would discriminate against nonaligned countries, force them "to join military alliances, thereby upsetting the present balance of power in the world," and create "monopolies in the field of conventional weapons...."[1]

On December 5, the sponsors of the resolution decided not to insist on putting it to a vote. They reserved the right, however, to bring the issue before a future General Assembly session.[2]

The subject of arms registration was briefly revived in 1970, when Secretary-General Thant proposed that the United Nations collect and publish information on conventional weapons along the lines of the League of Nations Armaments Yearbook.[3] Although the Netherlands and Sweden called attention to this proposal at the CCD,[4] there has been no formal proposal on the subject at either the CCD or the United Nations.

ARRANGEMENTS AMONG SUPPLIER STATES

Tripartite Arrangement for the Middle East, 1950

During the course of a Foreign Ministers' meeting in London in 1950, the three principal suppliers of arms for the Middle East--the United States, the United Kingdom, and France--formally restated the Middle East arms policy that they had announced in 1949.[5] Recognizing the need of the Arab states and Israel to maintain a certain level of armed forces to protect their security, the three Western powers reaffirmed their opposition to an arms race between the two sides and declared that all applications for arms from these countries would be regarded in the light of defense needs of the area as a whole and the necessity for self-defense purposes. They pledged that they would take immediate action, "both within and outside the United Nations" to prevent the violation of frontiers or armistice lines by any of these states.[1]

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[1] Documents on Disarmament, 1968, pp. 748-751.
[2] A/C.1/PV.1630, pp. 66-67.
[3] U.N. press release SG/SM/1261, May 22, 1970.
[4] CCD/PV.478, pp. 10, 19.
[5] See below, p. C-11.

In 1954, the United States agreed to grant military aid to Iraq. Although the aid was granted in accordance with the policies outlined in the tripartite agreement, the Iraqi Government, for internal political reasons, claimed that the United States had agreed to furnish the aid unconditionally. Later, Iraq joined three other Middle Eastern states and the United Kingdom in the Baghdad Pact,[2] which was supported by the United States.

The Iraqi moves caused anxiety among the Israelis and mixed emotions among the Arab states. Egypt was offended by Iraq's acceptance of arms from the United States, regarding such links between individual Arab states and the West as damaging both to the loose unity of the Arab League and to Egypt's political leadership in the area. On the other hand, Egypt was itself interested in receiving arms without conditions.[3] Since 1948 it had sought arms from the United States, but had been prevented from making any major purchases by various U.S. restrictions,[4] including the tripartite declaration. In London, eight Arab states called upon the British Foreign Office to tell the Minister of State that the West should take two steps to safeguard world peace: (1) "deter Israel from any further aggression"; and (2) "give immediate assistance to the Arab states with a view to strengthening them militarily."[5]

When Egypt learned in 1955 that it could not receive U.S. arms aid "unconditionally," it turned to Czechoslovakia and concluded an agreement to barter Egyptian cotton for Czech arms. Announcing the agreement on September 28, 1955, Nasser said that Egypt had appealed to the Western powers for arms, "but all we got were demands."[6]

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[1] American Foreign Policy, 1950-1955: Basic Documents, vol. II, p. 2237.

[2] *Ibid.*, vol. I, pp. 1257-1259. Iraq withdrew from the Baghdad Pact after the 1958 revolution.

[3] New York Times, Apr. 26, 1954, p. 1; Apr. 29, 1954, p. 13.

[4] I.e., the Mutual Security Act.

[5] New York Times, Sept. 18, 1954, p. 1.

[6] *Ibid.*, Sept. 28, 1955, pp. 4, 6.

Soviet Overtures on Restricting Arms to the Middle East, 1956, 1957

In 1956 and 1957, the Soviets indicated willingness to enter into an agreement to limit arms shipments into the Middle East. During a series of talks in London between the British and the Soviets, in the spring of 1956, the British proposed a joint declaration on limiting arms shipments to the Middle East. At that time the Soviets insisted that it was their policy to sell arms to those who wished to buy them and any steps that would restrict the sale of weapons to a particular country would be incompatible with this policy. The Soviets agreed, however, to the appointment of a joint committee to discuss these and other proposals.[1]

Not quite a week later, on April 27, 1956, N.S. Khrushchev, at that time First Secretary of the Communist Party of the Soviet Union, told newsmen at a press conference that if other states would stop supplying arms to the Middle East area through an agreement under the United Nations, the Soviet Union would be ready to cooperate in any general arms embargo. But as long as the sale of arms by other nations continued, he could not say that the Soviet Union "would not sell arms to states which urge us to do so."[2] The State Department regarded this statement as tantamount to a demand that the Americans and the British abandon the Baghdad Pact in exchange for a Soviet promise that no more arms would be sent to Egypt or other Arab countries.[3]

On February 11, 1957, the USSR proposed a joint pledge by the four powers--the United States, United Kingdom, Soviet Union, and France--not to deliver arms to Middle Eastern countries. The proposal was one of "six basic principles" to be laid down in a joint declaration on non-interference in the internal affairs of the region. The other principles included the solution of disputes by peaceful means, noninterference in the internal affairs of Middle Eastern countries, renunciation of attempts to involve these countries in military blocs, elimination of foreign military bases and withdrawal of foreign troops from the area, and promotion of economic development without any political, military, or other conditions.[4]

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[1] *Ibid.*, Apr. 21, 1956, pp. 1, 3.
[2] *Documents on Disarmament, 1945-1959*, vol. I, p. 615.
[3] *New York Times*, Apr. 28, 1956, pp. 1, 3.
[4] *Documents on Disarmament, 1945-1959*, vol. II, pp. 742-746.

The immediate reaction of the United States was to dismiss the proposals as propaganda and an attempt to discredit the Eisenhower plan for the Middle East,[1] to weaken the West militarily, and to assert new Soviet influence over the region.[2] The United States formally rejected the proposal on March 11, 1957. With respect to the point on refusing to deliver arms to the Middle East, the United States said that it recognized a need on the part of the Middle Eastern states to maintain a certain level of armed forces for internal security, self-defense, and defense of the area as a whole. The United States sought to avoid any arms race between the Arab states and Israel and had always kept in mind the need to encourage stability. It therefore regretted the Soviet Union's "massive shipments of arms into the area at a time when regional disputes there had become sharply exacerbated."[3]

U.N. Embargoes

The 1948 Cease-Fire in the Middle East

Several proposals designed to restore peace in the Middle East were offered in the Security Council in 1948 during the Palestine conflict. One of these was a U.K. draft resolution calling for a four-week cease-fire and upon both parties and "all governments to refrain from importing war material into Palestine during the cease fire."

Canada and Belgium supported the U.K. draft resolution, at least in principle. The United States, France, and the Israeli representative supported a Soviet draft resolution calling only for an immediate cease-fire. The Israeli and Soviet representatives opposed the U.K. draft resolution. The Soviet draft was rejected, and the U.K. draft resolution, modified by a number of amendments introduced by the United States, France, Colombia, Canada, and Syria, was adopted on May 29th by a paragraph-by-paragraph vote. In its final form, this resolution called upon "all Governments and authorities concerned" to refrain from importing or exporting war material into or to Palestine, Egypt, Iraq, Lebanon, Saudi Arabia, Syria, Transjordan, and Yemen during the cease-fire. It instructed the U.N. Mediator for Palestine and the Truce Commission to supervise the observance of these provisions, and provided for a sufficient number of military observers.[1]

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[1] A plan for authorizing the use of U.S. forces to resist Communist aggression and for supplying economic aid to the Arab world (Public Papers of the Presidents: Eisenhower, 1957, pp. 6-16).

[2] New York Times, Feb. 13, 1957, p. 4.

[3] Documents on Disarmament, 1945-1959, vol. II, pp. 748-752.

All parties concerned accepted the terms, and the cease-fire became effective on June 11, 1948. On July 15, it was extended by a Security Council resolution "until a peaceful adjustment" could be reached.[2] The embargo imposed by the cease-fire resolution remained in effect even after adoption of a Security Council resolution in November 1948 calling for a truce.[3] In response to an appeal by the Israeli representative for continued observance of the arms embargo, the United States, the United Kingdom, and France declared on August 4, 1949, that they were opposed to the development of an arms race in the Palestine area and would not send any supplies of arms into the Middle East in excess of the internal security and defense requirements of the States concerned.[4] As noted above, the three powers reiterated this policy in 1950 and managed to maintain an arms balance in the region until 1955.[5]

Strategic Embargo Against the People's Republic of China and North Korea, 1951

In 1951 the United Nations imposed a strategic embargo against North Korea and the People's Republic of China (PRC), upon the advice of a group especially established by the General Assembly to consider additional measures to be employed against North Korea.[1] A General Assembly resolution called on every U.N. member to "apply an embargo on shipment to areas under the control" of the PRC "and North Korean authorities of arms, ammunition and implements of war, atomic energy materials, petroleum and items useful in the production of arms, ammunition and implements of war..." It also appealed to all nations to apply the ban and report on their actions in implementing the ban within 30 days. The Soviet Union refused to participate in the discussions of the resolution. Contending that the imposition of an embargo was an action that belonged exclusively within the competence of the Security Council, it asserted that the General Assembly was not entitled to adopt decisions on such questions. The resolution was approved by the General Assembly on May 18 by 47 votes to 0, with 8 abstentions (Afghanistan, Burma, Egypt, India, Indonesia, Pakistan, Sweden, Syria). The Soviet Union and its satellites did not participate in the voting.

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[1] Report of the Security Council to the General Assembly Covering the Period from 16 July 1947 to 15 July 1948, General Assembly Official Records: Third Session, Supplement No. 2 (A/620), pp. 94-98.

[2] S/902.

[3] S/1079, Nov. 16, 1948. It was submitted by Canada with the support of France and Belgium. Report of the Security Council to the General Assembly Covering the Period from 16 July 1948 to 15 July 1949; General Assembly Official Records: Fourth Session, Supplement No. 2 (A/945), pp. 38-51.

[4] Report of the Security Council to the General Assembly Covering the Period from 16 July 1949 to 15 July 1950; General Assembly Official Records: Fifth Session, Supplement No. 2 (A/1361), pp. 16-21.

[5] The tripartite declaration of 1950; see above, pp. C7-C8. See also John Stanley and Maurice Pearton, The International Trade on Arms (Praeger, for the Institute for Strategic Studies), 1972, pp. 194-209.

By June 30, 1951, 40 member and three non-member states had reported to the Secretary-General that they had implemented the resolution. The representatives of the Soviet bloc refused to transmit the text of the May 18 resolution to their governments on the ground that it violated the U.N. Charter and had been illegally adopted under pressure from the United States and the aggressor bloc in the United Nations.[2] Like the Soviet Union, the PRC took the position that the embargo was illegal, a violation of the Charter. It called the embargo an attempt to extend aggressive war and warned the members of the United Nations that they would be liable "for all the consequences" of the embargo; on the other hand, it also stated that the embargo would make little difference.[3]

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[1] This was the Collective Measures Committee established by A/Res/498 (V), Feb. 1, 1951. Its subcommittee on Additional Measures, which actually made the recommendation, was composed of Australia, France, U.K., U.S., and Venezuela (General Assembly Official Records: Sixth Session, Supplement No. 1, A/1844, pp. 50-52).

[2] Ibid., pp. 53-54.

[3] New York Times, May 24, 1951, p. 5.

Middle East Cease-Fire, 1956

In 1956, the First Emergency Special Session of the General Assembly, meeting for the purpose of finding a solution to the Suez problem, adopted a U.S. cease-fire resolution which included an arms embargo. Introduced by Secretary of State Dulles on November 1, the resolution included a recommendation that all U.N. members refrain from introducing military goods into the area of hostilities and in general refrain from any acts which would delay or prevent the implementation of the resolution. The resolution was adopted on November 2 by 64 votes to 5 (Australia, France, Israel, New Zealand, the United Kingdom), with 6 abstentions (Belgium, Canada, Laos, the Netherlands, Portugal, the Union of South Africa).[1]

Embargoes Against South Africa

The General Assembly in 1962 and the Security Council in 1963, 1964, and 1970, adopted resolutions aimed at stopping the flow of arms to South Africa in efforts to induce it to abandon its *apartheid* policy.

The first General Assembly resolution condemned *apartheid* and urged all U.N. members to halt the shipment of arms to South Africa. It was introduced on October 26, 1962, by the representatives of 34 African and Asian states who declared that *apartheid* was a threat to international peace and security, and strongly criticized the heavy military buildup in South Africa as a danger to the entire African continent. Both the U.K. and U.S. representatives condemned the underlying rationale and the practice of *apartheid* but neither was willing to go so far as a total embargo. The U.S. representative said that his government had already forbidden the sale to the South African government of arms that might be used to enforce *apartheid*.

The USSR representative maintained that South Africa would not be able to carry out its *apartheid* policy without the support of the Western powers which, while formally condemning it, continued to uphold it in practice with a view to creating a sanctuary for colonialism and racialism in Africa south of the equator. He gave his full support to the draft resolution. The resolution was adopted on November 1, 1962, by a roll-call vote of 67 to 16 (U.S.), with 23 abstentions.[1]

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[1] *American Foreign Policy: Current Documents, 1956*, pp. 657-658.

On August 7, 1963, the Security Council adopted a resolution calling upon all states "to cease forthwith the sale and shipments" of arms and military equipment to South Africa. Introduced by Ghana, Morocco, and the Philippines, the original draft resolution also called for a boycott on all South African goods and for an embargo on exports to South Africa of all "strategic materials of direct military value." This provision was supported by only five countries (Ghana, Morocco, Philippines, USSR, Venezuela) and thus failed of adoption. The United States and the other Security Council members abstained. The amended resolution was adopted by 9 votes to 0, with 2 abstentions (France, United Kingdom).

During the debate the U.S. representative announced that his government would end the sale of all military equipment to the South African Government by the end of the calendar year, except for existing contracts still to be filled, while reserving the right to interpret that policy in the light of requirements for assuring the maintenance of international peace and security. However, he opposed sanctions on the ground that they were not likely to be effective and might harden the existing situation. Furthermore, the adoption of such measures, if compliance was not widespread, might damage the authority of the United Nations and the efficacy of the sanctions process envisaged in the Charter.

The United Kingdom and France opposed the resolution. The former took the position that the Security Council would be exceeding its powers under the Charter. The U.K. export licensing system would insure that no arms that would help enforce apartheid would be exported to South Africa. The United Kingdom denied that South Africa's actions, however repellent, were threatening international security; moreover, the U.K. trade with and investments in South Africa were of great importance. France maintained that the resolution would constitute direct interference in matters falling within the internal jurisdiction of a state. But it would take all measures to prevent the sale to the government of South Africa of weapons that might be used for repressive purposes.[1]

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[1] Annual Report of the Secretary-General on the Work of the Organization, 16 June 1962-15 June 1963; General Assembly Official Records: Eighteenth Session, Supplement No. 1 (A/5501), pp. 30-32.

South Africa questioned the right of the Security Council to impose an arms embargo. It contended that such a measure was denial of the right of individual or collective self-defense provided for in the Charter, and that the resolution could not be binding on any member state.[2]

On December 4, 1963, the Security Council adopted unanimously a resolution submitted by Norway which appealed for compliance with the provisions of the August resolution and added to the embargo "equipment and materials for the manufacture and maintenance of arms and ammunition in South Africa." This resolution also established a group of experts to examine methods of resolving the situation in South Africa and the part that the United Nations might play toward this end. Both the United Kingdom and France said that they would comply with this resolution in the same sense that they complied with the August resolution: i.e., no arms or the materials for manufacture and maintenance of arms that could be used to help enforce apartheid policy would be exported to South Africa. The United States said that it would implement the recommendation in the resolution within the same terms and conditions of its arms policy as stated in connection with the August resolution.[3]

The Security Council adopted a further resolution on June 18, 1964. Introduced by Norway and co-sponsored by Bolivia, this resolution reaffirmed the Security Council's call for cessation of the sale of armaments and materials for their manufacture and maintenance in South Africa. The resolution provided also for the establishment of an Expert Committee to report on measures that the Security Council might take for a peaceful resolution of the South African racial problem.

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[1] Report of the Security Council, 16 July 1963-15 July 1964; General Assembly Official Records: Nineteenth Session, Supplement No. 2 (A/5802), pp. 20-25.

[2] Ibid., p. 27. For the South African statement, see S/5438.

[3] Report of the Security Council, 16 July 1963-15 July 1964; General Assembly Official Records: Nineteenth Session, Supplement No. 2 (A/5802), pp. 27-34.

The United States, United Kingdom, and France reiterated the pledges they had made regarding implementation of the embargo in the 1963 resolutions. The United Kingdom reserved its right to fulfil existing contracts and its position on the supply of equipment for self-defense. The USSR said that the Norwegian resolution was weak and unsatisfactory. The only effective action would be the immediate application of economic, political, and other sanctions. The resolution was adopted by 8 votes to 0, with 3 abstentions (Czechoslovakia, France, USSR).[1]

Meeting again in 1970, this time "to examine the situation arising from violations of the arms embargo" in response to a request by 40 African states, the Security Council adopted a further resolution on July 23, 1970. This resolution was intended to close some "loopholes" in the previous resolutions and was sponsored by Burundi, Nepal, Sierra Leone, Syria, and Zambia. In its final form, it condemned violations of the arms embargo, and urged the strengthening of the embargo by (1) full implementation "without any reservations whatsoever"; (2) withholding supply of all vehicles and equipment for the use of South African armed forces and paramilitary organizations; (3) ceasing to supply spare parts for vehicles and equipment for use by such organizations, revoking all licenses and military patents to the South African government or companies for the manufacture of arms and military equipment; (4) refraining from granting any more such licenses and military patents to them; (5) banning investment in, or technical assistance for, the manufacture of arms and ammunition; (6) halting military training of South African armed forces and "other forms of military cooperation." The resolution also called upon all states to observe strictly and to assist in implementing the embargo. It was adopted by 12 votes to none, with 3 abstentions (France, U.K., U.S.).

The U.S. representative declared that since 1962, even before the embargo, his government had voluntarily and scrupulously avoided the sale of arms that might be used to enforce apartheid. It had supported the Security Council resolutions on the embargo and intended to carry them out faithfully. Current deliveries of arms to South Africa consisted entirely of spare parts supplied under contracts entered into before December 31, 1963. However, the United States could not support the resolution. Its more sweeping provisions went beyond the limits to which his government could commit itself.

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[1] Ibid., pp. 34-42.

The U.K. representative said that his country currently supplied only a small proportion of the arms received by South Africa and had willingly foregone orders amounting to tens of millions of pounds. The wide-ranging provisions in the resolution would conflict with existing commitments. Although his government had no intention of abandoning the arms embargo or of supplying arms for the wide category implied by "external defense," it did have under consideration certain limited exceptions that it considered related to its essential interests on which it had not yet reached any decision. For those reasons his delegation would abstain on the draft resolution. The Soviet representative still believed that more effective measures were necessary, but he supported the resolution.[1]

The Special Committee on Apartheid reported to the General Assembly on October 6, 1971, that, despite the Security Council resolution of 1970, "certain states" had continued to supply military equipment and technical assistance to South Africa for its military buildup. The Committee recommended urgent Security Council consideration of the continued violation of the arms embargo and a mandatory embargo and the adoption of a Nigerian draft resolution which contained the following arms provisions: (1) it declared that the arms embargo against South Africa made no distinction between arms for external defense and for internal repression; (2) it deplored the actions of governments which, in contravention of the arms embargo, had provided or allowed companies registered in their countries to provide assistance for the buildup of the military and police force in South Africa; (3) it called on all governments to implement fully the arms embargo; and (4) it requested the Special Committee on Apartheid to make a comprehensive study of the military assistance provided to South Africa by governments and private enterprises and to report to the 27th General Assembly.[2] On November 29, 1971, the General Assembly adopted this resolution[1] by a vote of 107 to 2 (Portugal, South Africa), with 5 abstentions (Australia, France, Malawi, U.K., U.S.).[2]

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[1] Report of the Security Council, 16 June 1970-15 June 1971; General Assembly Official Records: Twenty-sixth Session, Supplement No. 2 (A/8402), pp. 25-36.

[2] Report of the Secretary-General on the Work of the Organization, 16 June 1971-15 June 1972; General Assembly Official Report: Twenty-seventh Session, Supplement No. 1 (A/8701), pp. 40-41.

On February 4, 1972, the Security Council adopted a five-power resolution condemning the South African government for continuing its *apartheid* policies and calling upon all states to observe strictly the arms embargo against South Africa. The resolution was adopted by a vote of 14 to 0, with 1 abstention (France) as resolution 311 (1972).[3]

In its report of August 23, 1972, to the Security Council and the General Assembly, the Special Committee on *Apartheid* said that "certain states and foreign companies" were still collaborating militarily with the South African regime and that the continued supply of modern arms and equipment to South Africa was "most serious." It also reported that negotiations were going on for the purchase of guided missiles and other weapons. It feared that the evidence of large-scale expansion of the manufacture of arms, military vehicles, and ammunition within South Africa with the assistance of foreign governments and companies was creating a new situation by which the whole object of the arms embargo might be lost. The committee therefore recommended consideration by the Security Council of specific measures to ban the transfer to South Africa of advanced technology and scientific military information that could be used for the manufacture of arms, military vehicles, and ammunition. Further action by the Security Council was "a matter of urgent necessity" in order to enforce respect for the Council's decisions."[4]

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[1] A/RES/2775 A (XXVI).

[2] A/PV.1997, pp. 28-29.

[3] Report of the Secretary-General on the Work of the Organization, 16 June 1971-15 June 1972; General Assembly *Official Records: Twenty-seventh Session, Supplement No. 1* (A/8701), pp. 80-81.

[4] Report of the Special Committee on *Apartheid* (General Assembly *Official Records: Twenty-seventh Session, Supplement 22* /A/8722/), pp. 20-22.

Embargoes Against Portugal

Asian and African efforts to force Portugal to halt repression of rebellions in its African territories have resulted in 10 resolutions imposing arms embargoes against Portugal since 1962--seven by the General Assembly and three by the Security Council. The General Assembly adopted resolutions imposing embargoes in 1962 and 1965 and each year from 1967 through 1971, the Security Council in 1963, 1965, and 1972.

In 1962, a seven-member Special Committee on Territories under Portuguese Administration[1] recommended the adoption of a "complete embargo on further sales and supplies" of military equipment to Portugal especially by NATO members. In the Fourth Committee[2] of the General Assembly, Soviet-bloc and African delegates devoted considerable attention to the question of Portugal's use of so-called NATO-supplied, American-manufactured arms in Angola and other African territories under Portuguese administration.

The United States stressed that it had promptly called reports on such use of NATO arms to Portugal's attention and had "requested and received assurance that such material would not be diverted to Africa in the future." In the summer of 1961 the United States had also taken measures to prevent the commercial export of arms to the area. It was, however, impossible to control all arms transactions that took place through private channels. Since World War II large amounts of arms manufactured in the United States had been available on the international surplus market and could find their way into almost any area in the world.

Forty-one African and Asian states plus Jamaica sponsored a draft resolution requesting all states to refrain from offering any assistance to the Portuguese Government that would enable it to continue its repression of the people in its territories and to "take all measures to prevent the sale and supply of arms and military equipment to the Portuguese Government." Although the sponsors interpreted this provision as requesting cessation of only that military assistance which might be used by Portugal for the repression of the peoples of its territories, they would not change the wording to meet suggestions of the United States and other members which believed that this clause was tantamount to a complete arms embargo.

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[1] Established by the 16th General Assembly to study and formulate recommendations on the situation in territories under Portuguese administration. It was dissolved by the General Assembly in December 1962.

[2] The General Assembly Committee on Trusteeship and Non-Self-Governing Territories.

An amendment submitted by Italy to alter the language so that it might more accurately express the meaning the sponsors said they attached to it was defeated by a vote of 30 (U.S.) in favor, 58 opposed, with 9 abstentions. A counter-amendment that would have made the embargo a total one was submitted by the USSR but was subsequently withdrawn. The resolution as a whole was adopted by the Fourth Committee by a vote of 78 to 7 (Belgium, France, Portugal, South Africa, Spain, U.K., U.S.), with 12 abstentions (Australia, Austria, Brazil, Canada, Denmark, Greece, Italy, Luxembourg, Netherlands, New Zealand, Norway, Turkey). It was adopted by the General Assembly on December 20, 1962, by 82 votes to 7 (U.S.) with 13 abstentions.[1]

In 1963, Ghana, Morocco, and the Philippines introduced a draft resolution in the Security Council that required all states to "take all measures to prevent the sale and supply of arms and military equipment" to Portugal. The United States found this draft unacceptable, since some of the language in the rest of the draft seemed "almost certain not to promote but to inhibit" any meaningful dialogue between Portugal and appropriate African leaders. The embargo imposed by this draft became recommendatory rather than mandatory, when the sponsors accepted an amendment submitted by Venezuela. In its final form, the resolution requested "that all states... take all measures to prevent the sale and supply of arms and military equipment...to the Portuguese Government" for the purpose of continuing its repression of the people in its territories. The resolution was adopted by the Security Council on July 31, 1963, by a vote of 8 to 0, with 3 abstentions (France, U.K., U.S.). The U.S. representative explained that the United States had "for a number of years followed a policy of providing no arms or military equipment to Portugal for use in these territories" and had "also prohibited direct export of arms and military equipment to the Portuguese territories."

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[1] U.S. Participation in the UN: Report by the President to the Congress for the Year 1962, pp. 54-57.

He welcomed the modifications introduced by Venezuela, but abstained because he believed that the language was not calculated to achieve the results sought.[1]

The Security Council reinforced this resolution on December 11, 1963, with the adoption of a further resolution sponsored by the same states. The second resolution called upon all states to comply with the embargo imposed by the July 31 resolution. It was adopted by 10 votes to 0, with one abstention (France). The U.S. representative voted in favor, stating that the paragraph on an embargo accurately reflected U.S. policy "toward the sale and supply of arms and military equipment to Portugal."[2]

At the request of the Organization of African Unity (OAU), the Security Council met again in 1965. Both the OAU and the Soviet Union accused the NATO allies of Portugal of providing economic and military aid, thus making possible Portugal's resistance to anti-colonial movements in its territories. The OAU asked the Security Council to call for a total embargo on arms sales to Portugal and for mandatory economic measures to enforce Portugal's compliance with previous U.N. resolutions. The Soviet Union contended that the weapons and armaments used by the Portuguese against Africans were chiefly produced in West Germany, the United States, the United Kingdom, and Italy, and that Portugal had obtained them from NATO. The U.S. representative reaffirmed his previous statements on U.S. policy and denied that arms had been made available to Portugal within the NATO framework or that there was any U.S. economic assistance program either to Portugal or to its overseas territories.[3]

Nevertheless, on November 22, 1965, six states[4] submitted a draft resolution which combined an extension of the 1963 limited arms embargo to a total embargo with a total boycott of trade with Portugal. The Uruguayan delegation introduced a series of compromise amendments, revising the arms embargo provisions so that the Security Council would request all states to (1) refrain from offering the Portuguese Government any assistance that would enable it to continue its repression of the people of the territories under its administration and (2) take all the necessary measures to prevent the sale and supply of arms and military equipment to the Portuguese government for this purpose, including the sale and shipment of equipment and materials for the manufacture and maintenance of arms and ammunition to be used in the territories under Portuguese administration. This amendment was adopted by a vote of 8 (U.S.) to 0 with 3 abstentions (France, Netherlands, U.K.). The amended resolution was adopted on November 23, 1965, by a vote of 7 to 0, with 4 abstentions (France, Netherlands, U.K., U.S.).

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[1] Report of the Security Council, 16 July 1963-15 July 1964; General Assembly Official Records: Nineteenth Session, Supplement No. 2 (A/5802), pp. 9-34.

[2] Ibid., pp. 34-43.

[3] Report of the Security Council, 16 July 1965-15 July 1966; General Assembly Official Records: Twenty-first Session Supplement No. 2 (A/6302), pp. 44-49.

[4] Ivory Coast, Jordan, Liberia, Malaysia, Sierra Leone, Tunisia.

Explaining his vote, Ambassador Goldberg said that the amendment concerning a voluntary embargo on arms sales was a proper and appropriate recommendation for the Security Council to make and reflected what had been the U.S. position for some time. He had abstained on the resolution as a whole. however, because it did not emphasize the primary responsibility of the Security Council to explore every possible avenue toward a peaceful solution of the problem.[1]

The same process was repeated in December 1965 at the 20th General Assembly, when 35 Asian and African states proposed a resolution by means of which the General Assembly would take a series of measures against Portugal, including the breaking of diplomatic relations and a boycott on all trade. For the first time, the resolution singled out the NATO states, requesting them to refrain from assisting Portugal in carrying out its repressive policies and to observe a boycott on arms and military equipment and on equipment and materials for their manufacture or maintenance.[2] The 20th General Assembly adopted this resolution by a vote of 66 to 26 (U.S.), with 15 abstentions.[3]

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[1] U.S. Participation in the UN: Report by the President to the Congress for the Year 1965, pp. 312-315.

[2] See General Assembly Official Records: Twentieth Session, Supplement No. 14 (A/6104), pp. 62-63.

[3] Annual Report of the Secretary-General on the Work of the Organization, 16 June 1965-15 June 1966; General Assembly Official Records: Twenty-first Session, Supplement No. 1 (A/6301), pp. 61-62.

Since then, the General Assembly has adopted resolutions imposing embargoes against Portugal in 1967, 1968, 1969, 1970, 1971, and 1972. All of these resolutions have specifically appealed to states members of NATO which continued to render assistance to Portugal. During the negotiation of each of these resolutions, the United States has reiterated its statement concerning U.S. policy regarding provisions of arms to Portugal.

In 1972, two resolutions on Portuguese territories, both very similar to previous ones on the subject, included embargoes--a Security Council resolution of February 4 and a General Assembly resolution of November 14. Submitted by Guinea, Somalia, and the Sudan, the Security Council resolution was adopted by 9 votes to none, with 6 abstentions (Argentina, Belgium, France, Italy, U.K., U.S.).[1] The General Assembly resolution was recommended by the Fourth Committee, in which it was co-sponsored by 50 African, Asian, and socialist states.[2] It was adopted without change by the General Assembly by 98 votes to 6 (Brazil, Portugal, South Africa, Spain, U.K., U.S.), with 8 abstentions (Belgium, France, Guatemala, Honduras, Italy, Luxembourg, Uruguay, Venezuela).[3]

Embargoes Against Southern Rhodesia

Condemning the "illegal racist minority regime" of Ian Smith in Southern Rhodesia (Zimbabwe), the Security Council imposed sanctions, including an arms embargo on the areas in 1965 and 1966, and decided in 1970 that the existing sanctions should remain in force. The 25th General Assembly in 1970 adopted a resolution drawing the attention of the Security Council to the need to give urgent consideration "to the question of imposing fully and unconditionally, under international supervision, an embargo on arms of all kinds to the illegal regime of Southern Rhodesia." In 1971, the 26th General Assembly requested all states "to withhold or continue to withhold assistance of any kind" from the regime in Southern Rhodesia as well as from the Portuguese and South African governments.

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[1] Report of the Secretary-General on the Work of the Organization, 16 June 1971-15 June 1972; General Assembly Official Records; Twenty-seventh Session, Supplement No. 1 (A/8701), pp. 80-81.

[2] A/8889, Nov. 13, 1972.

[3] A/PV.2084, pp. 13-15.

At the request of the United Kingdom and 35 African states,[1] an emergency session of the Security Council was convened on November 12, 1965, one day after the Smith regime declared the independence of Southern Rhodesia. Asserting that the U.K. Government was the only lawful government of Southern Rhodesia, the British representative asked U.N.members to refuse to recognize the new regime. The United Kingdom had prohibited all export of arms to Southern Rhodesia and proposed, in addition, to impose unilaterally economic sanctions against the regime. The United States responded that it had already taken a number of steps against the regime. It was instituting immediately a comprehensive embargo on the shipment of all arms and military equipment to Southern Rhodesia.[2] France opposed any action by the Security Council and took the position that the conflict was not international in character but an internal matter between the United Kingdom and Southern Rhodesia. For that reason, France would abstain on any votes on the question. The Security Council immediately adopted a Jordanian resolution condemning the Southern Rhodesian action and calling for non-recognition of the rebel regime.[3]

On November 13 the United Kingdom introduced a draft resolution calling upon all states to refuse to recognize the regime, to refrain from giving any aid to it, particularly in the form of "arms, equipment or war material," and to lend all necessary assistance to the U.K. Government in making effective the measures it had taken against the regime. The African states wanted stronger measures. The Soviet Union urged the Security Council to impose political, economic, and other sanctions against the "racist regime," and promised full support for the people of Zimbabwe. The USSR also wanted the most radical measures taken against Portugal and South Africa for aiding and abetting the Smith regime. The Ivory Coast noted that economic sanctions against Southern Rhodesia would be ineffective in stopping South African aid. It thought that the United Kingdom should send troops to close the borders with the Portuguese territories and South Africa or that the same sanctions should be applied against Portugal and South Africa as against Southern Rhodesia.

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[1] Algeria, India, Pakistan, Ghana, Zambia, Sierra Leone, Senegal, Mali, Tanzania and Nigeria were invited by the President of the Security Council to participate in the discussion without vote. Guinea, Ethiopia, Mauritania, Gambia, Jamaica, Somalia, and Sudan were invited to participate in certain meetings.

[2] American Foreign Policy: Current Documents, 1965, pp. 685-688.

[3] Ibid., p. 689.

On behalf of the African countries, the Ivory Coast introduced a draft resolution demanding that the rebellion be crushed immediately, through invoking the enforcement measures provided for in articles 42 and 43 of the U.N. Charter, and calling for a complete interruption of economic relations, including an embargo on oil and petroleum products and on all means of communications. The African countries urged the use of armed force by the United Kingdom and its allies in conjunction with the Security Council.

The United Kingdom said that no breach of international peace had as yet taken place and that armed intervention would be neither appropriate nor sensible. It was ready to widen the range of the measures to include an embargo on oil. Warning that some of the consequences of wider measures could redound severely on some of Southern Rhodesia's near neighbors, the United Kingdom urged the Security Council to appoint a working group to study how wider measures could be imposed and what the consequences might be.

On November 19, Bolivia and Uruguay submitted a draft resolution intended to bridge the gap between the U.K. and the Ivory Coast drafts. The draft resolution put the burden for quelling the rebellion on the United Kingdom, condemned the "racist minority," and called upon the U.K. Government to bring the minority regime to an end. In operative paragraph 8, the draft called upon all states to refrain from assisting or encouraging the illegal regime; to desist from providing it with arms, equipment, and military material; to do their utmost to break off all economic relations with it; and to impose an embargo on oil and petroleum products. On the following day, a modified form of this resolution was adopted by 10 votes to 0, with one abstention (France) as resolution 217 (1965).[1]

On January 13, 1966, the United States reported to the United Nations that it had taken a number of steps against Southern Rhodesia, including "a comprehensive embargo on the shipment of arms and military equipment."[2]

Meeting at Addis Ababa on November 9, the Organization of African Unity (OAU) adopted a resolution calling for mandatory and comprehensive sanctions under Chapter VII of the

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[1] *Ibid.*, pp. 689-690.

[2] *Ibid., 1966*, pp. 592-593.

Charter. At the request of the United Kingdom, the Security Council met on December 8 to consider the Southern Rhodesian question. At their request, Zambia, Senegal, Algeria, Pakistan, and India were invited to participate in the discussion. The United Kingdom submitted a draft resolution providing for mandatory sanctions. U.N. members would be required to prevent any activities by their nationals or in their territories that would promote the sale or shipment to Southern Rhodesia of arms, ammunition, military aircraft or vehicles, and equipment and material for the manufacture and maintenance of arms and ammunition, notwithstanding any previous contracts. Zambia wished to add a complete oil embargo. Senegal wanted mandatory comprehensive sanctions on all products, including petroleum, and advocated the use of force if necessary to enforce them. The United States said it would apply the full force of its law to implement sanctions adopted by the Security Council.[1] The USSR attacked the Western powers for not taking more effective measures and advocated stringent sanctions.

The Security Council approved African amendments to the British draft resolution providing for an embargo on oil and certain other products and reports from U.N. members and specialized agencies to the Secretary-General on implementation of the resolution. The amended resolution was adopted on December 16 by a vote of 11 to 0, with 4 abstentions (Bulgaria, France, Mali, USSR).[2] Implementing this resolution, President Johnson issued Executive Order 11322 proscribing transactions with Southern Rhodesia involving arms and the other prohibited commodities.[3]

Feeling that the selective mandatory sanctions of 1966 had failed, 36 African nations again took the Southern Rhodesian question to the Security Council in March 1968. Jamaica and Zambia were invited to participate in the discussion. During the debate, Zambia accused South Africa and Portugal of illegally supplying oil to Southern Rhodesia, but there were no charges that the arms embargo had been violated. Five Afro-Asian states submitted a draft resolution censuring Portugal and South Africa and calling on all states to sever economic and other relations with Southern Rhodesia. A British resolution omitted the censure provision but proposed that all U.N. members should cease all imports from Southern Rhodesia and all exports except medical or educational goods. After consultation among the members, the Security Council adopted a revised version of this resolution on May 29.[1]

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[1] Ibid., pp. 604-608.

[2] The resolution appears ibid., pp. 604-605. The Security Council debate is reported in Report of the Security Council, 16 July 1966-15 July 1967 (General Assembly Official Records: Twenty-second Session, Supplement No. 2 [A/6702], pp. 69-81).

[3] 32 Fed. Reg. 119; American Foreign Policy: Current Documents, 1967, p. 276.

Two years later, five other Afro-Asian nations introduced a draft resolution in the Security Council condemning the United Kingdom for refusing to use force and extending the 1968 sanctions to Portugal and South Africa, which were accused of subverting the sanctions by furnishing Southern Rhodesia with arms and supplies. The United States doubted that the application of sanctions to Portugal and South Africa would receive enough international support to make them effective. It feared that an attempt to seek such action against economically powerful states would merely demonstrate the limitations of the United Nations and further entrench the Smith regime. The paragraph calling for sanctions on South Africa and Portugal was rejected by 7 votes to 0, with 8 abstentions (Republic of China, Colombia, Finland, France, Nicaragua, Spain, U.K., U.S.). The vote on the modified resolution was 9 to 2 (U.K., U.S.), with 4 abstentions (Colombia, Finland, France, Nicaragua). It thus failed of adoption because of the British and American vetoes.

On March 18, 1970, the Security Council adopted a compromise Finnish resolution demanding the immediate withdrawal of South African police and armed personnel from Southern Rhodesia. It also called on all U.N. members to cease any relations they might still maintain with that country and to take more stringent measures to prevent any circumvention of the sanctions the Security Council had previously adopted. This resolution was adopted by a vote of 14 to 0, with one abstention (Spain).[2]

In November the sponsors of the unsuccessful five-power proposal introduced a new draft resolution in the Security Council continuing existing sanctions, deploring the attitude of states that gave assistance to Southern Rhodesia, and urging all states not to grant any form of recognition to the Salisbury regime. Although it was continuing to apply sanctions, the United Kingdom was unwilling to accept a Security Council action that would restrict it in reaching a political settlement acceptable to the Rhodesian people as a whole. The USSR, which had supported the original five-power proposal, did not consider that the new version went far enough. France thought that it exceeded the powers of the Security Council. The vote on this resolution was 12 to 1 (U.K.), with two abstentions (U.S., France). It failed of adoption because of the British veto. On November 17 the Security Council adopted a compromise resolution calling on the United Kingdom to take urgent and effective measures to bring an end to the rebellion and deciding that the sanctions should remain in force.[1]

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[1] Report of the Security Council, 16 July 1967-15 July 1968; General Assembly Official Records: Twenty-third Session, Supplement No. 2 (A/7202), pp. 86-97.

[2] Report of the Security Council, 16 July 1969-15 June 1970; General Assembly Official Records: Twenty-fifth Session, Supplement No. 2 (A/8002), pp. 54-67.

Meanwhile, the Special Committee on the Situation With Regard to the Implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples had approved a program of action recommending that wider sanctions, including all measures under article 41 of the Charter, be applied to Southern Rhodesia, and that U.N. members give urgent consideration "to the question of imposing fully and unconditionally, under international supervision, an embargo on arms of all kinds" to South Africa and Southern Rhodesia.[2]

The Indian rapporteur told the General Assembly that Portugal and South Africa were using arms to suppress colonial peoples and that the sanctions against Southern Rhodesia should be extended to these countries.[3] The Soviet Union and its allies accused NATO countries of aiding the Portuguese, South Africans, and Rhodesians.[4] The United States regretted that it was unable to vote in favor of the resolution incorporating the program of the Special Committee. In the American view, it proposed courses of action for the Security Council which experience had shown to be impracticable for lack of necessary support. The United States recalled that it had conscientiously supported the arms embargo against South Africa, embargoed arms for use in the Portuguese African territories, and firmly implemented the sanctions against Southern Rhodesia.[1] The resolution was nevertheless adopted by a vote of 86 to 5, with 16 abstentions. Australia, New Zealand, South Africa, the United Kingdom, and the United States voted against the resolution, and the following countries abstained: Austria, Belgium, Canada, Denmark, Finland, Iceland, Italy, Japan, Luxembourg, Malawi, Netherlands, Norway, Spain, Swaziland, and Sweden.[2] The United States opposed similar General Assembly resolutions in 1971 and 1972.[3]

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[1] Report of the Security Council, 16 June 1970-15 June 1971; General Assembly Official Records: Twenty-sixth Session, Supplement No. 2 (A/8402), pp. 23-27.

[2] A/8086. The committee was established by G.A. res. 1654 (XVI), Nov. 27, 1961 (General Assembly Official Records: Sixteenth Session, Supplement No. 17 (A/5100), p. 65).

[3] A/PV.1861, pp. 7-11.

[4] Ibid., pp. 17, 37, 66.

The United States has continued to apply sanctions to Southern Rhodesia and to embargo arms shipments to that country. The enactment of new U.S. legislation in 1971, however, permitted imports into the United States of chrome ore and other strategic materials from Southern Rhodesia. The United States did not participate in voting on the General Assembly resolution of November 16, 1971, calling on it not to import chrome ore.[4]

In 1972 three African nations introduced a draft resolution in the Security Council demanding scrupulous implementation of the 1968 and 1970 resolutions, condemning all acts in violation of the resolutions, and calling for full cooperation in implementing sanctions. This resolution was adopted on July 28 by a vote of 14 to 0, with the United States abstaining.[5] A second Security Council resolution reaffirmed sanctions and urged the United States to fully cooperate with them. During the debate on this resolution the U.S. representative said that the United States had supported the sanctions program and would continue to do so, except for the strategic imports required by the 1971 legislation.[6] This resolution was adopted by a vote of 13 to 0, with two abstentions (U.S. and U.K.).

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[1] A/PV.1862, p. 37.

[2] General Assembly Official Records: Twenty-fifth Session, Supplement No. 28 (A/8028), pp. 1-3.

[3] Ibid., Twenty-sixth Session, Supplement No. 29 (A/8429), pp. 16-17; A/RES/2946 (XXVII), Dec. 7, 1972.

[4] Department of State Bulletin, Dec. 13, 1971, pp. 690-691; U.S. Participation in the U.N.: Report by the President to the Congress for the Year 1971 (Dept. of State pub. 8675, 1972), pp. 187-188.

[5] S/PV.1655, p. 27.

[6] S/PV.1666, pp. 26-27.

U.S. Efforts to Achieve U.S.-Soviet Mutual Restraint on Transfers to the Middle East and Other Areas, 1967-1972

Since the Arab-Israeli war of 1967, the United States has made several attempts, through both diplomatic channels and public appeals, to interest the USSR in a joint undertaking to limit the flow of arms to the Middle East. Thus far these efforts have been to no avail, and both the United States and the USSR have continued to provide large amounts of sophisticated weaponry to the region.[1]

The United States has repeatedly made clear to the Soviets its desire to limit a Middle East arms race on a reciprocal basis. In a letter of February 4, 1970, President Nixon proposed to Premier Kosygin that the United States and the Soviet Union discuss the question of limiting the arms which the two countries were providing to the Middle East.[2] On March 23, 1970, Secretary of State Rogers announced that the United States would hold in abeyance a decision on Israel's request for additional aircraft. He said that restraint would be "required on the part of other major suppliers to the Middle East," and that no nation could "pursue a policy of seeking unilateral advantage in the area" if peace was to be achieved. He added that the United States would "make renewed efforts in diplomatic channels...to engage the other major suppliers to the Middle East in early arms limitation talks."[3]

The Soviet Union rejected the U.S. proposal, maintaining as it had since the Glassboro talks in 1967, that arms restraints could not be considered until the Israelis had withdrawn from occupied territories.[4] In the spring of 1970, the USSR responded to Israeli deep-strike air attacks with a major military buildup in Egypt.

In his 1971 foreign policy report to Congress, the President again stated that the United States was "prepared to seek agreement with the USSR and the other major powers to limit arms shipments to the Middle East."[5] In his 1972 foreign policy report, he said that despite U.S. restraint in military supply policy -

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[1] For the 1967 efforts, see above, pp. C-4 to C-6.

[2] Weekly Compilation of Presidential Documents, Mar. 1, 1971, pp. 346-347.

[3] Department of State Bulletin, Apr. 13, 1970, pp. 477-478.

[4] Documents on Disarmament, 1967, p. 270; 1968, p. 577.

[5] Ibid., 1971, p. 56.

> ...substantial new Soviet pledges and shipments of arms to Egypt continued the arms race. At the end of the year, I felt obliged to reiterate that the United States would not allow the military balance to be upset.
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> The USSR continued to build up its own military facilities in Egypt and to station increasingly sophisticated weapons there.
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> . . . .
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> The Soviet Union has an interest in avoiding major conflict in the Middle East. We hope the Soviet Union understands that it can serve this interest best by restraint in its arms supply, refraining from the use of this dispute to enhance its own military position, and encouraging the negotiation of peace.[1]

He added that the United States was committed to maintaining a military balance in the Middle East, but its fundamental position was that the United States and the USSR had "a special responsibility to restrain the flow of armaments."[2]

The President has also attempted to interest the USSR in undertaking to restrain arms shipments to other parts of the world. In his 1970 foreign policy report to Congress, he stated that the great powers should show "restraint in their sale of arms to regions in conflict" and that the United States was "ready to discuss practical arrangements to this end."[3] Observing "a significant Soviet presence and substantial Soviet military aid" in the area, the President stressed in his 1973 foreign policy report that the major powers had a continuing obligation to refrain from steps which would "raise again the danger of their direct engagement in military conflict."[4]

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[1] *U.S. Foreign Policy for the 1970's: The Emerging Structure of Peace. A Report to the Congress, by Richard Nixon, President of the United States, February 9, 1972*, pp. 133-134.

[2] *Ibid.*, p. 180.

[3] *Documents* on Disarmament, 1970, p. 32.

[4] *Annual Report on Foreign Policy: Message From the President of the United States Transmitting His Annual Report on Foreign Policy* (H. doc. 93-96, 93d Cong., 1st sess.), p. 114.

With regard to South Asia, the United States embargoed arms shipments to both Pakistan and India during the 1965 war over Kashmir. After this embargo was lifted in 1967, the United States restricted deliveries to relatively small amounts of non-lethal equipment and spare parts for lethal equipment it had previously provided. This policy remained in effect from April 1967 to December 1971, when the United States reacted to another outbreak of hostilities between India and Pakistan by again imposing a total embargo on military shipments to the area. On the other hand, the Soviet Union, its European allies, and some West European countries furnished large-scale military aid to India during 1965-1972 in the form of tanks, combat aircraft, and other equipment. They also provided military aid, although to a much lesser extent, to Pakistan. The PRC also provided substantial amounts of arms to Pakistan during this period.

In 1972, President Nixon stated in his foreign policy report to Congress that outside powers should assume responsibility for restraining the flow of armaments to South Asia.[1] On March 14, 1973, the State Department announced that the United States had decided to revert to the policy of the 1967-1971 period. The United States would sell to Pakistan and India non-lethal equipment plus spare parts for equipment supplied previously. It would also carry out an unfulfilled commitment to sell arms to Pakistan that it had undertaken prior to the embargo of 1971. Under this policy, Pakistan would be permitted to obtain approximately 1.1 million dollars worth of non-lethal equipment from the United States and, in addition, 300 armored personnel carriers that it had contracted for in 1970.[2] On the next day, the President told a news conference that the commitments had been made during the previous administration and amounted to $14 million in military assistance to Pakistan. He declared that under present circumstances, this decision would in no way create conditions that could lead to another outbreak of war. India's superiority was so enormous that "the possibility of Pakistan being a threat to India" was "absurd." He said that the 1971 war had split Pakistan in half, while India, besides having "an arms capability in itself," was purchasing significant amounts of arms from the Soviet Union.[3]

The President stated in his foreign policy report for 1972 that the United States would be willing "to accept limitations on military and economic aid to South Vietnam if North Vietnam will accept limitations on the nearly one billion dollars of aid it receives annually from its allies."[1] When the Paris Agreement on Ending the War and Restoring Peace in Vietnam (January 23, 1973) was concluded, he appealed to the other major powers for "mutual restraint so that the peace we have achieved can last."[2] At a press conference of January 24, Dr. Kissinger stressed that peace in Indochina required "the self-restraint of all the major countries," especially those which had "supplied the wherewithal for this conflict." The United States was prepared to exercise such restraint, and the Soviet Union and the People's Republic of China could make "a very major contribution to peace in Indochina" by pursuing a similar policy.[3] He later added that the United States was not depending so much on formal agreement to cut off the flow of arms to Indochina as on the desire of the major powers to achieve peace.[4]

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[1] U.S. Foreign Policy for the 1970's, pp. 146-147, 180.

[2] Department of State transcript, Mar. 14, 1973 (DPC 46).

[3] Weekly Compilation of Presidential Documents, Mar. 19, 1973, p. 277.

COCOM Strategic Trade Controls, 1950-

In addition to the arms control initiatives described above, the United States and some of its principal allies have since 1950 controlled their exports of strategic goods to Communist countries (except Yugoslavia) through a multilateral control system known as the Consultative Group (CG) and its working committee, the Co-ordinating Committee (COCOM) for East-West trade policy. Comprising 15 members at present, the CG was established as a result of American initiative in November 1949 by the United Kingdom, France, Italy, the Netherlands, Belgium, Luxembourg, and the United States. The original members were later joined by Norway,

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[1] *U.S. Foreign Policy for the 1970's*, p. 119.

[2] *Weekly Compilation of Presidential Documents*, Jan. 29, 1973, p. 44.

[3] Ibid., pp. 64-74.

[4] *Ibid.*, Feb. 26, 1973, pp. 172-173.

Denmark, Canada, and the Federal Republic of Germany, and subsequently by Portugal, Greece, Turkey, and Japan. COCOM began functioning in January 1950 as the permanent working committee of the CG.

Operating without a formal treaty or charter, the CG-COCOM is not a part of any other international organization. It serves as a forum for exploration of trade control questions and considers and recommends specific control measures and their application and enforcement. It also maintains international embargo lists of strategic materials, i.e., items--including arms--whose export could contribute to the military capabilities of Communist countries. These are lists of items which all COCOM members have accepted as subject to control and represent the minimum level of control. Each member country also has its own list and its own system of administering strategic trade controls and implementing the international understandings, e.g., the United States participates in COCOM in conformity with the requirements of the Mutual Defense Assistance Control Act of 1951, also known as the Battle Act,[1] and maintains more extensive control than its COCOM partners.

With the outbreak of the Korean war in 1950, the focus of control expanded from the USSR and Eastern Europe to East Asia. The COCOM extended its embargo list to the point of a virtual embargo on even industrial equipment and major raw materials to East Asian Communist areas, with especially stringent controls, including restrictions on shipping and bunkering, for the People's Republic of China (PRC) and North Korea. In 1954, a major revision of embargo lists applicable to Soviet allies in Europe--but not to Asian Communist countries--took place, reflecting changes in the East-West political and economic climate brought about in part by the Korean truce (1953) and the death of Stalin, as well as technological developments. Although COCOM also established a special atomic energy embargo list at that time, its list of arms, ammunition, and implements of war remained the same. In 1957, COCOM abolished the "China differential control" and its strategic lists for the Communist areas in both Europe and Asia have been the same since then.

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[1] American Foreign Policy: Basic Documents, 1950-1955, vol. II, pp. 3101-3105.

But the United States continued to maintain a virtually complete embargo on trade and financial transactions with Asian Communist countries until April 14, 1971, when President Nixon announced the end of the 21-year embargo on trade with the PRC.[1]

COCOM lists have been reviewed and revised every two or three years since 1954 to reflect technological and economic developments. The most recent review was concluded in the spring of 1972.[2]

ARRANGEMENTS AMONG RECIPIENT STATES

Discussions at the Conference of the Committee on Disarmament (CCD)[3]

In messages to the ENDC in 1966 and 1968, President Johnson proposed the exploration of regional measures to limit competition in acquisition of conventional weapons. On January 27, 1966, he said that arrangements for such regional arms control measures should be initiated within the regions concerned and include an undertaking not to import or to produce the proscribed military equipment. The United States would respect such arrangements, if assurance could be given that they would be observed.[4]

Elaborating on the first proposal at the ENDC on April 19, 1966, ACDA Director Foster outlined six guiding principles for regional arrangements. These principles included obligations to be undertaken by both the countries in the regions concerned and the potential suppliers. He stressed the need to insure that such arrangements contributed to the security of the states concerned and to maintenance of a stable military balance.[5]

In his 1968 message, President Johnson underscored the importance of measures to halt non-nuclear arms races. He said that the United States was ready to support "any reasonable" conventional arms limitation measure affecting the activities of the weapons-producers that would make a regional agreement more effective, including a requirement that suppliers publicize or register their arms shipments to a particular region.[1]

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[1] *Weekly Compilation of Presidential Documents*, Apr. 19, 1971, pp. 628-629.

[2] *The Battle Act Report, 1966*, pp. 1-3; *ibid., 1969*, pp. 1-2; *ibid.*, *1971*, pp. 1-3.

[3] See above, p. C-3, n. 1.

[4] *Documents on Disarmament, 1966*, pp. 7-8.

[5] *Ibid.*, p. 229.

There was relatively little response to the U.S. initiatives. Nigeria indicated that the proposal was of particular interest to the African states. It agreed on the regional approach and believed that "African countries themselves should initiate discussions on how to check the inflow of arms into the continent." It stressed, however, that countries supplying the arms "should exercise restraint and show a greater sense of proportion in the matter."[2] No agreement among developing countries to limit armaments in their regions could last, it said unless developed countries restrained "their nationals from shipping arms to dissident groups in developing countries to be used against governments."[3] Moreover, unless the measures of conventional disarmament were general, not regional, the less-developed countries would become the "'sitting duck' in a world armed to the teeth."[4] Canada approved the U.S. proposal. It suggested that regional restrictions similar to those of the Latin American nuclear-free zone treaty could be worked out for conventional armaments, and that President Johnson's Middle East proposal of June 19, 1967, could be extended and made applicable to other areas as well.[5] Mexico welcomed the regional approach. It observed, however, that one of the factors contributing to the "absurd" regional armaments races was the facility with which small and medium-sized countries could "acquire armaments from the great powers." If the main suppliers would agree to abstain from providing weapons to their clients, "the developing countries might be able to eliminate one of the greatest obstacles to their development."[6] Sweden thought that discussion of regional disarmament should be postponed until a later date, but it did not wish to discourage initiatives for action in specific regions.[7]

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[1] _Ibid., 1968_, p. 532.

[2] ENDC/PV.262, May 5, 1966, p. 13; ENDC/PV.283, Aug. 18, 1966, p. 13.

[3] ENDC/PV.327, Aug. 31, 1967, p. 23.

[4] _Documents on Disarmament, 1967_, pp. 378-379.

[5] ENDC/PV.311. pp. 8-10. For the Middle East proposal, see above, pp. C4-C6.

[6] ENDC/PV.389, p.23.

[7] ENDC/PV.383, p. 9.

The Soviet Union offered no comment on the U.S. initiatives. A Soviet memorandum of July 1, 1968, supported regional disarmament measures in various areas, including the Middle East, but added that the question of limiting the arms race in that region could be discussed after the Israelis withdrew from the territories they had occupied in 1967.[1]

On February 17, 1970, ACDA Director Smith urged the CCD not to neglect the problem of conventional arms, which accounted for the major share of the world's military spending. The control of military expenditures and the traffic in conventional arms were the concern of all countries and not just the nuclear powers. He said that the United States was ready to work with interested countries, and would as an arms supplier cooperate in the implementation of agreements reached among the parties concerned.[2]

The United Kingdom also recognized the seriousness of the problem of conventional weapons and expressed its willingness to cooperate with other countries to control the international traffic in arms and provide for regional arms limitation agreements.[3] Morocco,[4] Romania,[5] and Sweden[6] held similar viewpoints. Argentina, on the other hand, contended that it was not traffic in conventional armaments but the manufacture of weapons by a small number of technologically and industrially highly developed countries that was responsible for the arms race. No one could seriously advocate "disarmament of the unarmed," it said, as long as the producing powers were free to increase their already saturated arsenals.[7]

On August 13, Ambassador Leonard introduced and summarized a U.S. working paper at the CCD which discussed the guidelines for regional undertakings that Mr. Foster had introduced in 1966. The paper contained three additional guidelines intended to facilitate the achievement of a formal, multilateral arms transfer arrangement in a region: (1) states within a region could agree not to acquire certain categories of armaments; (2) states outside the region could agree not to supply specified types of armaments to the parties to such an agreement; and (3) countries could make available to other countries in the region information on their current armaments and future arms procurement plans.[1]

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[1] Documents on Disarmament, 1968, p. 469. This position was reaffirmed by the Soviet representative in the ENDC (ENDC/PV.381, p. 17).

[2] Ibid., 1970, pp. 12-13.

[3] CCD/PV.450, p. 18.

[4] CCD/PV.452, pp. 22-23.

[5] CCD/PV.455, p. 21

[6] CCD/PV.450, p. 18.

[7] CCD/PV.454, p. 10.

Subsequently, Mexico, Sweden, and Yugoslavia submitted a draft comprehensive program on disarmament which stressed the need to convene regional disarmament conferences at the initiative of states of the region, to consider conventional arms and armed forces limitations.[2]

Pakistan believed that efforts to achieve conventional disarmament on a regional basis must be accompanied by effective measures to remove the causes of regional tensions and conflicts. Morocco said that the regional limitation of conventional arms could be dangerous for countries which sought only to defend themselves against aggression or to repel foreign occupation. It thought the problem of conventional arms could best be solved by radical worldwide disarmament measures.[4]

In a message to the CCD, February 23, 1971, President Nixon urged it to give increasing attention to conventional weapons limitations.[5] In May and again in August of 1971, Ambassador Leonard called for discussions on conventional armaments, warning that time was "not on our side."[6] Advances in military technologies, the increasing variety of the weapons themselves, and the complex interrelationships among the various weapon systems all combined to add to the difficulties of making progress in this area. The United States was convinced that the development of restraints on conventional arms was "a matter of vital concern to the international community." He invited comments on the guidelines in the 1970 working paper.[7]

At the opening of the spring 1972 session of the CCD, Ambassador Martin tried to induce the Committee to enter into a discussion of conventional arms limitations. He said that the United States had been concerned with the need for responsibility on the part of outside powers to restrain the flow of armaments to areas of tension. In addition, the U.S. Congress had recently stipulated certain considerations that the U.S. Government must take into account, such as whether such assistance would contribute to an arms race, increase the possibility of outbreak or escalation of conflict, or prejudice the development of arms control arrangements.[1]

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[1] Documents on Disarmament, 1970, pp. 406-408, 420-425.

[2] Ibid., p. 463.

[3] CCD/PV.490, pp. 10-13.

[4] CCD/PV.491, pp. 23-27.

[5] Documents on Disarmament, 1971, p. 21.

[6] Ibid., pp. 287-288.

[7] Ibid., pp. 528-537.

The Netherlands offered the only comment. It agreed that the CCD should explore the problem of conventional weapons. But it also suggested that major supplier countries should take "unilateral steps of self-control and self-restraint."[2]

At the close of the 1972 summer session, Ambassador Martin expressed concern over the "apparent lack of interest" on the part of many CCD members towards limitation of conventional weapons. He urged members to present what they believed to be particular problems to be overcome in the area as well as suggestions on possible approaches worthy of study.[3]

U.S. Initiatives in the United Nations, 1972

U.S. efforts in the United Nations in 1971 and 1972 to initiate discussions of the control of conventional arms have been no more successful than its efforts at the CCD. On November 11, 1971, Ambassador Bush urged the First Committee of the 26th General Assembly to begin "to try to reach a better understanding of which steps in this field might be possible and which might not be."[4] At the 27th General Assembly he again stressed the importance of considering the control of conventional arms, "if we are to move towards a structure of peace and security."[5] Although Belgium, Canada, Ireland, Sweden, Colombia, Costa Rica, and Denmark also saw the need for conventional arms control, there has been no concrete suggestion with respect to the means by which it could be attained, and scarcely any discussion of the control of the traffic in arms.

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[1] CCD/PV.545, p. 17

[2] CCD/PV.552, p. 19.

[3] CCD/PV.584, pp. 16-17.

[4] Documents on Disarmament, 1971, pp. 710-717.

[5] A/C.1/PV.1872, p. 51.

Others, like Brazil, Ethiopia, and Morocco, believed that conventional arms limitation would only be feasible within the context of general and complete disarmament,[1] while Kuwait suggested that attention be given to the causes of conventional arms races.[2] At the 27th General Assembly, Kuwait implied that any conventional arms control proposal would be an attempt to "disarm the unarmed."[3]

Latin American Initiatives

The Costa Rican Initiative, 1958

Within the inter-American system, there have been several initiatives to limit arms in Latin America. Since the region is largely dependent on imports for its arms supply, any effective agreement limiting arms or military expenditures would have the effect of restricting arms transfers to the region.

In an address of March 5, 1958, to the OAS Council, the Costa Rican representative said that he saw no need for Latin American countries to maintain large modern armed forces, which were useless against communist propaganda and could play no role in a third World War. They were not needed for defense against other Latin American nations, since disputes within the Hemisphere were settled by peaceful means. Latin American forces were needed only to maintain internal security and to exercise a "secondary function in continental defense," which should mostly be left up to the United States. He contemplated a regional Latin American convention banning nuclear weapons, conventional arms imports from countries outside the Western Hemisphere, and verified limitations on the forces and armaments of all Latin American countries, to be established by a regional commission. The United States would undertake not to export armaments to Latin American countries above the agreed levels. He argued that this system would make additional economic resources available for development.[4] He then introduced a resolution to establish a special committee to study his proposal.[1]

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[1] See A/C.1/PV.1831, pp. 18-30 (Ethiopia); A/C.1/PV.1835, p. 49 (Morocco); A/C.1/PV.1831, p. 53 (Brazil).

[2] A/C.1/PV.1829, p. 71.

[3] A/C.1/PV.1875, p. 47.

[4] Consejo de la Organización de los Estado Americanos, Acta de la sesión ordinaria celebrada el 5 de marzo de 1958, pp. 14 ff.

Without committing himself on the substance of the Costa Rican proposal, the U.S. representative stated that the policy of the United States was determined both by the needs of defense against extracontinental attacks and by a desire to promote economic and social development, which could be held back by "any unnecessary diversion of economic resources to military purposes beyond those required for legitimate national and collective defense needs":

> ...The United States could not but view with sympathy any effort of any group of states to work out in terms that they considered desirable, a plan which would permit the greatest possible dedication of economic resources to constructive purposes so long as the basic requirements for national and collective defense under present world conditions were still adequately met.[2]

The Mexican representative asserted that his country spent only seven percent of its budget on its army. It was pursuing a peaceful policy and threatened no one. It was willing to support any disarmament resolution that applied to all countries and respected national sovereignty, but the Costa Rican proposal affected sovereignty and the inter-American system of collective security.[3]

The representative of the Dominican Republic stressed the obligations of hemispheric defense under the Rio treaty and said that adoption of the Costa Rican proposal would divide the OAS "between disarmed States and an armed State; between half-armed States and the United States of America, a nation which must be considered totally armed."[4]

The Costa Rican representative replied that it was only realistic to admit that the United States was the only American nation capable of maintaining modern nuclear forces.

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[1] _Ibid._, pp. 28-29.
[2] _Ibid._, pp. 59-62.
[3] _Ibid._, pp. 30-41.
[4] _Ibid._, pp. 44-49.

He did not see why a verified Latin American arms pact would violate sovereignty when the Latin American nations themselves had supported arms limitations in the United Nations for other powers.[1]

The Bolivian representative, however, maintained that disarmament should be simultaneous and universal. Although the Bolivian army was being used only for peaceful civil work, it was necessary for Latin America to help in the defense of the Continent and the individual defense of each state.[2] The Brazilian representative agreed with the critics and declined to support the Costa Rican proposal.[3] The Nicaraguan representative distinguished between universal and partial disarmament and questioned the competence of the Council.[4] The Mexican representative objected to leaving hemispheric defense to the United States alone and warned that it was only a step "from protectionism to colonialism." He thought that this was contrary to the Bogotá Charter.[5] The Cuban representative considered that the powers of the commission proposed by Costa Rica would infringe on the non-intervention principle recognized in inter-American treaties.[6]

Many representatives, including some of the speakers, were without instructions. On the suggestion of the President of the Council, consideration was suspended pending study by the chancelleries of the member states.[7] The Costa Rican proposal was not taken up again.

The Chilean Proposal, 1959-1960

Meeting in Santiago in August 1960, the Fifth Meeting of Consultation of Ministers of Foreign Affairs of the American States adopted a resolution urging their governments "to study the problem of military expenditures in order that, should these be excessive in relation to the requirements of national and hemispheric defense, they may gradually and progressively reduce them."[1]

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[1] *Ibid.*, pp. 49 ff.

[2] *Ibid.*, pp. 64-69.

[3] Consejo de la Organización de los Estados Americanos, *Acta de la sesión extraordinaria celebrada el 6 de marzo de 1958*, pp. 2-3.

[4] *Ibid.*, pp. 7 ff.

[5] *Ibid.*, pp. 20-21.

[6] *Ibid.*, p. 29.

[7] *Ibid.*, pp. 32-33.

Concerned about large arms purchases by Peru, Argentina, and Brazil. President Alessandri of Chile said in a newspaper interview of November 20 that Latin America's economy would be seriously weakened if arms competition was allowed to continue.[2] On December 30 the Chilean representative called this interview to the attention of the OAS Council. In view of the economic needs of their peoples, he said, they had no right to evade the problem of diverting what was spent on unnecessary armaments to constructive purposes. Unable to defend themselves against nuclear attack, the Latin American countries needed arms only for internal security and hemispheric defense, and the arms levels for hemispheric defense should be fixed by agreement. He accordingly declared that there should be a special conference on the limitation and balance of arms.[3]

Noting that Alessandri's initiative had been "hailed as an act of statesmanship," President Eisenhower endorsed the idea of regional arms control in an address of March 1, 1960, to the Chilean National Congress:

> Working out the procedures for achieving limitation and assuring compliance will not be easy. The level of armaments which a nation feels it must maintain to assure the safety of its people involves a decision which the sovereign authority of that country must make for itself. In reaching its decision each government will have to balance the minimum requirements for security against the drain on its resources.
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> While the technical steps will be difficult, multilaterial agreement can be achieved if each nation of the hemisphere

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[1] *American Foreign Policy*: *Current Documents, 1959*, p. 371.

[2] *New York Times*, Nov. 21, 1959, p. 6.

[3] Consejo de la Organización de los Estados Americanos, *Acta de la sesión extraordinaria celebrada el 30 de diciembre de 1959*, pp. 19-23.

> has confidence that it need not fear unprovoked aggression.

The inter-American system should provide that confidence, and he declared that the United States would fulfill its treaty obligations if any American state was the victim of aggression.[1]

At the end of the visit, he and President Alessandri stated in a joint communique that they had given special attention to the arms problem and to the Chilean initiative, "with the objective of reaching an appropriate equilibrium with a general policy of limitation on arms purchases."[2]

In the OAS Council (March 30) the Chilean representative suggested setting up a committee to prepare for a conference.[3] At its April 6 meeting the Council discussed a Chilean resolution to set up a committee. The preamble included provisions stating that (1) the acquisition of arms in excess of the levels necessary for internal order, territorial defense, or a contribution to continental defense weighed heavily on the economy of many countries in the hemisphere and that (2) an agreement limiting arms to these purposes would free "considerable financial resources" for economic and social development.[4]

The Chilean proposal was supported without qualification by the representative of El Salvador, Colombia, Uruguay, Costa Rica, Bolivia, and Haiti. The Cuban representative also expressed support and hoped that it would not be adulterated. He agreed that excessive arms expenditures hampered Latin American economic and social development and recalled the heavy armaments of Batista's "tyranny." But Cuba would not accept international police, it insisted on its right to defend itself against hostile activities in the Caribbean, and it needed airplanes for this purpose.[1]

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[1] Department of State Bulletin, Mar. 28, 1960, p. 481.

[2] American Foreign Policy: Current Documents, 1960, p. 279

[3] Consejo de la Organización de Estados Americanos Acta de la sesión extraordinaria celebrada el 30 de marzo de 1960, pp. 16 ff.

[4] Consejo de la Organización de Estados Americanos, Acta de la sesión extraordinaria celebrada el 6 de abril de 1960, pp. 2-14.

The Mexican representative expressed support for the Chilean proposal but denied that his country's arms expenditures were excessive. He suggested setting up a small working group to examine the proposal.[2] Brazil, Ecuador, Peru, and Venezuela supported the Mexican suggestion. The Argentine representative took a similar position. He agreed with the general goals of limitation and balance of arms, but in a strictly realistic sense and in accordance with the criteria and requirements of irrenunciable sovereignty. He denied that Argentine forces were a burden on the economy and maintained that they contributed to national economic development by promoting industrial and technical progress.[3]

The U.S. representative was prepared to vote for the Chilean proposal immediately but was willing to defer to the idea of a working group.[4] At the close of the discussion, the President of the Council appointed a working group comprising the representatives of Argentina, Chile, Colombia, Peru, and Venezuela. The Chilean representative regretted that his proposal had not yet been adopted but understood the need of some representatives to refer the text to their chancelleries.[5]

The working group had not yet reported on April 19, when the Bolivian representative proposed to amend the Chilean resolution to provide that the arms limitation conference should also deal with de facto territorial settlements and study the problem of landlocked countries in Latin America. The Chilean representative declined to accept the

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[1] *Ibid.*, pp. 21-27.
[2] *Ibid.*, pp. 14-17.
[3] *Ibid.*, pp. 38-39.
[4] *Ibid.*, pp. 43-44.
[5] *Ibid.*, pp. 46-47.

Bolivian amendments.[1]

In August the Seventh Meeting of Consultation of the Ministers of Foreign Affairs of the American Republics adopted a resolution declaring that an agreement to avoid military expenditures not needed for internal security or defense "would in many countries free considerable financial resources," increasing funds available for economic and social development in Latin America. This resolution was transmitted to the OAS Council with a recommendation that it continue to study measures for convoking a conference on arms limitations.[2] The OAS Council referred the resolution to the working group,[3] and no conference was ever held.

The Punta del Este Summit Declaration, 1967

During the preparations for the inter-American summit meeting of April 1967, the United States encouraged the Latin Americans to include the question of arms limitation on the agenda. On the fifth anniversary of the Alliance for Progress (August 17, 1966), President Johnson noted "a recurrent tendency" among Latin American countries "to seek expensive weapons with little reference to the real requirements of security"--a tendency "often reinforced by competition among the neighboring countries." He urged them to "find a way to avoid the cost of procuring and maintaining unnecessary military equipment that will take the clothes off the backs and the food away from the stomachs and education away from the minds of our children."[4] On

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[1] Consejo de la Organización de los Estados Americanos, *Acta de la sesión extraordinaria celebrada el 19 de abril de 1960*, pp. 43-48. Bolivia had lost its coastline to Chile in the War of the Pacific (1879-1884).

[2] *Seventh Meeting of Consultation of Ministers of Foreign Affairs, August 22-29, 1960: Final Act* (Washington: Pan American Union, 1960), pp. 9-10.

[3] Consejo de la Organización de los Estados Americanos, *Decisiones tomadas en las sesiones*, vol. XIII, p. 72.

[4] *American Foreign Policy: Current Documents, 1966*, p. 302.

November 18, Secretary of State Rusk said at a news conference that the United States "would be glad to see some understanding among our friends in Latin America as to the level of arms and to the purpose to which those arms will be put."[1]

On December 1, Assistant Secretary of State for Inter-American Affairs Gordon denied the existence of an arms race in Latin America but favored efforts to prevent one. He told the Pan-American Society that U.S. economic assistance programs had "been provided with a view to discouraging the acquisition of costly and sophisticated nonessential military equipment." Unlike other areas of the world, Latin America had no supersonic aircraft and no ships larger than destroyers of the 1960's, and its armies were equipped mainly to meet internal security needs. He said, however, that there was a "latent danger of resource wastage on unnecessary military equipment with nothing to justify it except prestige," and resources were "too badly needed for developmental purposes for such wastage to be afforded." He added that the United States was encouraging "our friends in Latin America to work towards understandings" that would avert the start "of a real arms race in costly and unnecessary items of military equipment."[2]

At the 11th Meeting of Consultation of Ministers of Foreign Affairs of American states in Buenos Aires (February 1967), "Elimination of Unnecessary Military Expenditures" was placed on the agenda of the summit conference at the suggestion of Brazil.[3] The suggestion was opposed only by Peru. The guidelines prepared by the Foreign Ministers called for an expression of the intention of Latin American countries to limit military expenditures.[4]

At the close of the summit meeting at Punta del Este on April 14, 1967, the Latin American Presidents issued a declaration which contained, without significant change, the Foreign Ministers' formulation regarding military expenditures as expressed in the guidelines. In chapter VI, they expressed "their intention to limit military expenditures in proportion to the actual demands of national security" and to avoid "those expenditures that are not indispensable for the performance of the specific duties of the armed forces and, where pertinent, of international commitments that obligate their respective governments."[1]

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[1] Ibid., pp. 304-305.
[2] Ibid., pp. 309-310.
[3] Ibid., 1967, pp. 662-663
[4] OAS Chronicle, Apr. 1967, pp. 14-15.

In a statement after the Punta del Este meeting, President Johnson included the elimination of unnecessary military spending as one of the immediate problems to be dealt with, thus endorsing the statement in the summit declaration.[2] This endorsement was underscored subsequently by Assistant Secretary of State Oliver, who, on November 14, 1967, emphasized that the United States firmly endorsed the objectives of the declaration on limiting military expenditures. He also noted that initiatives were under way in various Latin American countries to obtain broad agreement on arms limitations.[3]

Concerned about Peruvian plans to acquire Mirage aircraft, President Frei of Chile publicly appealed in October for renewed efforts for a Latin American arms-limitation agreement. Under Secretary of State Katzenbach said in an address of November 17 that the United States had encouraged this trend and that its policy had been "a great success" by any reasonable standard. But its power was limited:

> As elsewhere, however, our power to influence the decisions of sovereign nations has its limits. We cannot, even if we would like to, dictate to them what their policy should be. Our influence is limited to our power to persuade; and our ability to persuade is dependent upon the good will, the confidence and trust we enjoy with the leaders, governments, and people of these countries.

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[1] American Foreign Policy: Current Documents, 1967, pp. 674-675.

[2] Public Papers of the Presidents of the United States: Johnson, 1967, vol. I, pp. 449-450.

[3] American Foreign Policy: Current Documents, 1967, pp. 712-713.

> If a country is convinced that its security is threatened and judges its arms requirements differently than we do, our ability to affect its decisions is very limited.[1]

During the 14th meeting of the Inter-American Committee for the Alliance for Progress (January 1968), there was some discussion of including military expenditures in the context of the annual reviews of national development. The reaction of such key Latin American nations as Argentina and Brazil was negative, and the question was dropped.

The Colombian Proposal, 1971

In a memorandum of March 10, 1971, Colombia informed the other OAS members that it intended to propose at the April 1971 meeting of the OAS General Assembly a study of measures to implement the 1967 summit declaration on elimination of unnecessary military expenditures. It suggested that a special commission representing all 23 OAS countries undertake, and submit specific proposals on, a study of unnecessary military expenditures with relation to:

> (1) the influence of unnecessary military expenditures on economic and social development;
>
> (2) arms which, because of their excessive cost and clearly offensive nature, are disproportionate to internal security, and could by common accord be eliminated and;
>
> (3) the adoption of a criterion of proportionality between the arms, territorial area, population, and economic potential on the one hand, and the basic requirements of national security on the other hand.[2]

On April 7, Colombia and Costa Rica requested the inclusion on the agenda of the OAS General Assembly of an item on consideration of measures to implement the summit declaration on elimination of unnecessary military expenditures.[1] Addressing the plenary OAS General Assembly, Secretary of State Rogers said that the United States "would be glad to cooperate in discussions on this Latin American initiative in any way the other members think appropriate."[2] Although the United States did not participate in the debate, it voted to place the Colombian item on the agenda and supported the resolution that was eventually adopted.

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[1] *Ibid*., p. 30.

[2] To Geneva, Department of State tel. 43613, Mar. 16, 1971, Unclassified.

In the General Committee, the Venezuelan representative objected that the summit declaration expressed only an intention to limit arms expenditures and did not contemplate collective measures. He also questioned the competence of the OAS General Assembly to consider the question.[3] The Brazilian representative agreed and maintained that Latin American military expenditures were minimal compared to the world total.[4]

In reply, the Colombian representative agreed that the summit declaration expressed intentions. He denied that he was thinking in terms of "collective measures," and he was willing to abandon the word "measures." He also pointed out that the OAS had considered arms limitations on eight previous occasions.[5]

Bolivia, Colombia, Costa Rica, and the Dominican Repubic introduced a resolution in the General Committee calling for the creation of a special committee to carry out a study on the cooperation of OAS members in order to achieve the aims set forth in the summit declaration.[6] The Brazilian representative doubted the value of setting up a special committee and argued that Latin America was an example to the world--an almost disarmed region which hardly had the military forces necessary for its internal security and the fulfilment of its international obligations.[7] The Argentine representative maintained that arms limitations was a U.N. problem.[1] The Venezuelan representative objected to setting up a special commission and proposed that the question be referred to the OAS Permanent Council. He also opposed the use of the word "cooperation".[2] The Peruvian representative denied that Latin American armaments hampered development, which was the most important problem.[3] Most other delegations expressed support for arms limitations, with some qualifications.

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[1] Organización de los Estados Americanos, Asamblea General Primer periodo ordinario de sesiones, San José, Costa Rica: actas y documentos, vol. I, p. 384.

[2] OAS press release E/4/71, Apr. 15, 1971.

[3] Primer periodo ordinario de sesiones, vol. I, pp. 388-391.

[4] Ibid., pp. 395-397.

[5] Ibid., pp. 391-395.

[6] Ibid., pp. 416-417.

[7] Ibid., pp. 431-439.

On April 22 the OAS General Assembly approved a revised version of the Venezuelan resolution. It recognized that maximum resources should be made available for economic development and social progress, "without prejudice to the demands of national security of each country." The OAS Permanent Council was instructed to study the "meaning and scope" of the summit declaration and requested to submit a preliminary report before the next session of the OAS General Assembly.[4]

The preliminary report (February 16, 1972) reached the following conclusion about chapter VI of the summit declaration:

> ...it is a firm policy statement by the Presidents of the Latin American countries who subscribed to it, aimed at avoiding military expenditures that are not indispensable, that the application of that declaration must be the exclusive responsibility of each government in its own territory and in keeping with each country's constitutional provisions, and that the purpose of this policy declaration is--in addition to preserving the peaceful tradition of Latin America without prejudice to internal and external security or to inter-

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[1] Ibid., pp. 439 ff.
[2] *Ibid.*, pp. 450-456.
[3] *Ibid.*, pp. 457-459.
[4] Organization of American States, General Assembly: *First Regular Session, San Jose, Costa Rica, Proceedings*, vol. II, p.2

> national commitments--to assist in applying the maximum resources available for economic development and social progress, in keeping with the conditions of each country.

The summit declaration was still in effect, and OAS members could consider the advisability of reiterating to the next session of the OAS General Assembly their intention to apply maximum resources to economic development and social progress and to limit military expenditures "to those indispensable."[1] The OAS Permanent Council endorsed the report on February 16. The U.S. representative abstained because the United States did not participate in chapter VI of the summit declaration.[2]

In an address of April 12 to the OAS General Assembly, Secretary of State Rogers said that the task of arms limitation should "not be restricted to the world's strongest powers" or to nuclear weapons. He pointed out that the General Assembly would consider regional arms limitation:

> ...We hope that efforts will be insistently pursued to achieve agreements within this hemisphere limiting other armaments. Such agreements could help divert resources from military expenditure to the economic development and social progress which are still so vital.[3]

On April 20 the OAS General Assembly adopted a resolution endorsing the conclusions of the report of the Permanent Council and reaffirming the aim of Latin American states to apply the maximum resources to economic development and social progress and their intention to restrict military expenditures to those indispensable for security.[1] As in the Permanent Council, the United States abstained from voting on this resolution.

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[1] OAS doc. CP/RES.57 (63/72), Feb. 16, 1972.

[2] Organización de los Estados Americanos, Consejo Permanente, Acta de la sesion ordinaria celebrada el 16 de febrero 1972, p. 15.

[3] The Inter-American Community in a Larger World (Department of State publication 8654), p. 6.

Indochina Agreements

Vietnam Agreements, 1973

On January 27, 1973, the Agreement on Ending the War and Restoring Peace in Vietnam was signed at Paris by the United States, the Democratic Republic of Vietnam, the Republic of Vietnam, and the Provisional Revolutionary Government (PRG) of South Vietnam. Article 7 of this agreement obligated the two South Vietnamese parties[2] not to accept the introduction of troops, military advisers or personnel, armaments, munitions, and war material into South Vietnam. The agreement permitted, however, periodic replacement of military equipment that was destroyed, damaged, worn out, or used up after the ceasefire. Replacement of such equipment by weapons of the same kind and characteristics would take place on a piece-for-piece basis.[3] A protocol provided six legitimate points of entry for replacement equipment, three for each side.[4]

Compliance with article 7 of the agreement was to be supervised by a bilateral Joint Military Commission of the two South Vietnamese parties and by an International Commission of Control and Supervision (ICCS), comprised of Canada, Hungary, Indonesia, and Poland. The ICCS was to station a number of teams at the entry points and also establish teams for other areas, including the demilitarized zone. The agreement required unanimous approval by the four members for official reports but also permitted each member to submit individual views.[5]

Later, an international conference was held at Paris by the four parties to the agreement, the ICCS countries, France, the United Kingdom, and the USSR. Article 6 of the final act of this conference (March 2, 1973) provided that the ICCS should submit reports and views to the four parties to the agreement, who would be responsible for transmitting them to other parties to the final act.[6]

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[1] OAS General Assembly, Second Regular Session, Washington, D.C., April 11 through 21, 1972: Proceedings, vol. II, pp. 100-101.

[2] The Republic of Vietnam and the PRG

[3] Weekly Compilation of Presidential Documents, Jan. 29, 1973, p. 46.

[4] Ibid., p. 59.

[5] Ibid., pp. 48, 66-67.

[6] Department of State Bulletin, Mar. 26, 1973, p. 346.

The Laos Cease-fire Agreement, 1973

The Agreement on the Restoration of Peace and Reconciliation in Laos signed by the Vientiane Government and the Patriotic Forces on February 21, 1973, forbade the introduction into Laos of all types and kinds of foreign-made weapons or war materials, "except for those specified in the Geneva Agreements of 1954 and 1962," i.e., armaments "specified as necessary for the defense of Laos."[1] If it should become necessary to replace damaged or worn-out weapons or war materials, the two sides would "consult and arrive at an agreement." The agreement was to be supervised by a bilateral Joint Commission and the International Commission for Supervision and Control (consisting of India, Poland, and Canada) set up by the 1954 agreement.[2]

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[1] American Foreign Policy, 1950-1955: Basic Documents vol. I, pp. 775-785; American Foreign Policy: Current Documents, 1962, pp. 1075-1083.

[2] ACDA files.

Conventional Arms Sales in the Carter Administration

Dilemmas of Restraint

Michael D. Salomon and David J. Louscher

> *"The virtually unrestrained spread of conventional weaponry threatens stability in every region of the world."*
>
> President Carter, quoted in *The New York Times*, May 20, 1977

Conflicting Trends

Throughout his presidential campaign and in the first year of his presidency, Jimmy Carter made clear his commitment to reducing the amount of conventional arms sold worldwide by the United States. The United States, he said, could not be "both the world's champion of peace and the world's leading supplier of the weapons of war." This commitment reflected a view, widely held in the Congress in the middle 1970's, that under Nixon and Ford arms sales had run amuck.

Critics of the Republican policies pointed to the growing technological sophistication and military capability of the modern arms transferred to the developing world, and to the staggering dollar total ($17 billion) and annual growth rate (20 percent) by 1977. They argued that such arms sales had become indiscriminate and would only increase global instability and violence, especially in the developing world. The result was, the critics said, a decrease in the ability of the U.S. to control events in crucial areas, the exact opposite of the goals pursued by Nixon and Ford.

These critical views were especially influential in the Democratic-controlled Congress, which—between 1972 and 1977—imposed a wide variety of restrictions on the transfers of U.S. weapons to other countries. These included specifying which nations could receive grant assistance to obtain weapons, which nations could purchase weapons outright, and who could receive military credit assistance. Limitations were also placed on credit availability for weapons co-production agreements. Prescriptions were provided as to how the United States could transfer weapons. Specific types of regimes were prohibited from receiving security

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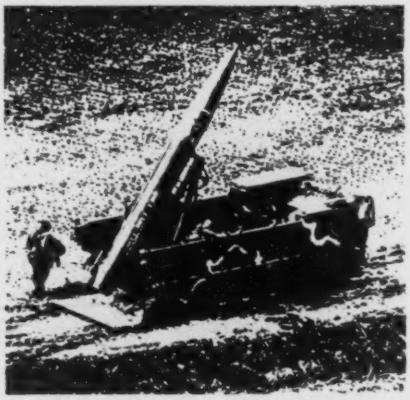
Dilemmas of Restraint

From page 1

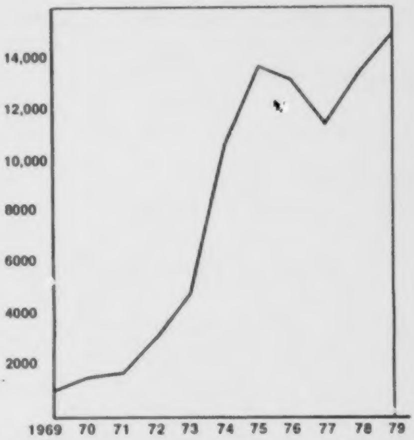
assistance, such as violators of human rights. Restrictions were placed on the dollar volume of total sales which could be made to Latin America and Africa. Specific restrictions were placed on the number of United States military personnel which could be assigned to security assistance functions in each recipient nation, and the activities of these personnel were severly proscribed.

Yet, while criticism of the Nixon-Ford policies was being translated into the new Carter Administration's commitment to reduce arms sales, the international demand for sophisticated arms sales was increasing. This was due to a number of factors:

(1) An increased number of nations with security problems only marginally related to the East/West conflict; (2) the emergence of economic superpowers, especially the OPEC states, without the industrial capability to produce sophisticated weapons systems, but having the resources to bargain with arms producers; (3) expanded Soviet arms sales; (4) Western European arms makers vulnerable to the new economic powers and compelled by domestic economic considerations to sell arms; and (5) the perception of friends and allies of a reduced U.S. ability to respond to international security threats except through arms transfers. A reduction in U.S. arms sales in the face of this "high demand" international environment was a difficult goal, which the Carter Administration proved ultimately unable to achieve. The multilateral restraint effort collapsed. As a result the unilateral effort came under greater pressure for revision and the President found it increasingly necessary to use arms transfers to solve a growing list of policy problems, particularly in the Middle East.



Italy, West Germany, Belgium and Israel have ordered the Lance battlefield support missile.



U.S. Government-to-Government Sales Agreements, 1969-1979 (in $ million)

Source: *Report by the Comptroller General of the United States, ID-79-22 (U.S. Government Accounting Office, Washington, D.C., 21 May 1979), Appendix I.*

The Carter Restraint Policy

The unilateral policy. The Administration's restraint policy consisted of two elements, each dependent on the other. The first was a unilateral effort to reduce arms transfers to the developing world. This consisted initially of an $8.6 billion ceiling and a series of arms sales guidelines. The ceiling was placed on the dollar volume of new foreign military sales, though a number of arms sales and assistance programs were to be exempted, as we shall see. The Administration guidelines also prohibited:

—initial introduction into a region of advanced weapons systems which would create a significantly higher combat capability, or the sale or coproduction of such weapons until they were operationally deployed with U.S. forces;

—development or significant modification of advanced weapons systems solely for export;

—co-production agreements for significant weapons, equipment, and major components;

—retransfers of certain weapons, equipment and major components to third countries;

—promotion of arms sales abroad by agents of the United States or commercial firms without prior policy level authorization by the Department of State.

Continued

From page 7

The ceiling and the prohibitions were conceived by the Administration as a signal to other arms suppliers that the United States was interested in limiting arms sales by all producing countries. It was also a means to compel recipient nations to plan more adequately for future weapons acquisitions. However, the unilateral policy had several inherent problems. First, since the ceiling exempted commercial sales, sales to NATO members, sales to Japan, to Australia, and to New Zealand, as well as military construction, it did not appear to most other nations as genuine restraint. Military construction sales, for example, in recent years have amounted to nearly $2 billion per year, and commercial sales annually amount to more than $2 billion.

Second, the ceiling did not permit the Administration the flexibility to deal with requests from friendly nations. These requests often varied from year to year, according to recipient perceptions of threats to them. Similarly, the prohibition against the production of advanced weapons solely for export denied the United States government a means by which to adapt to the unique geographical, technological, and developmental conditions which existed in the Third World. The Administration placed itself in a postion whereby American weapons were, in many cases, either too sophisticated for certain recipients, or did not meet the current perceived needs of those recipients. (It should be noted that the Administration is currently supporting the development of a jet fighter aircraft solely for export, as a consequence of this dilemma as well as out of concern that the prohibition provided new sales opportunities for the Soviet Union and Western Europe.) Finally, the collapse of sales to Iran, which had constituted about 30 percent of the arms sales total, has made the ceiling a meaningless instrument of restraint.

The multilateral effort. The Administration's multilateral effort consisted of discussions with the Europeans and formal negotiations with the Soviet Union. There was scarcely any progress in the European discussions, for a number of reasons. First, the most important exporters, Britain and France, said they were not interested in multilateral restraint until the Soviets showed they were willing to cooperate. In fact, the lack of any West European interest in arms export restraint was due to the high economic benefits arms sales bring to their troubled economies. These include maintaining high national employment and providing economies of scale in the manufacture of weapons for their own forces. Britain, for example, exports 25 to 36 percent of all the defense equipment it manufactures. France exports 55 to 60 percent.

The formal negotiations with the Soviets fared little better, though the reasons for their eventual collapse were more complex than the European talks. The negotiations with the Soviet Union were conducted from December 1977 until December 1978 and consisted of four formal rounds. During the first round in late 1979, the Soviet delegation to the negotiations did not appear enthusiastic. As Leslie Gelb, chief of the United States delegation and Director of the State Department's Bureau of Politico-Military Affairs stated, "it was unclear whether the Soviets would agree to meet again." Six months later, however, a second round of negotiations resulted in a joint communique in which the Soviets acknowledged that multilateral arms transfer restraint was a serious item for negotiation. At the third round of negotiations the Soviet delegation agreed to the United States position that the talks should be concretized through negotiating arms sales restraints to specific regions of the globe. At the fourth and final round, however, the talks collapsed.

Weapons Delivered To The Third World, 1977-1979

Weapons Category	U.S.A.	U.S.S.R	Major West European
Tanks and self-propelled guns	2,086	5,265	785
Artillery	795	2,535	465
APC's and armored cars	6,957	5,035	1,740
Major surface combatants	16	2	12
Minor surface combatants	28	85	60
Submarines	1	4	8
Guided missile boats	0	38	17
Supersonic combat aircraft	456	1,280	160
Subsonic combat aircraft	131	255	2
Helicopters	150	530	520
Other aircraft	223	185	275
Surface-to-air missiles (SAM's)	4,476	4,625	55

Source U.S. Government

There were several broad conditions which made the chance of a negotiated arms export restraint regime with the Soviet Union very small. First, the Soviet Union and the United States, for the most part, have exclusive arms sales clients. Only a few regimes (including Peru, Libya, North Yemen, Afghanistan, Pakistan, Nigeria, and Zambia) have received arms from both, and consequently, there are limited opportunities for mutual restraint. Second, the interests of the superpowers in arms sales restraints vary greatly from region to region.

The United States was prepared to discuss limiting arms transfers to Africa and Latin America, primarily to limit future Soviet penetration into these areas. The Soviets proposed a "neighbors" concept as a framework for negotiations whereby each superpower would refrain from transferring arms to the neighbors of the other. The Soviets were also interested in limiting sales to the Middle East and Far East, hoping to undermine the United States position in an area of great and longstanding strategic importance.

Nevertheless, while it may be true that no meaningful agreement on conventional arms transfers was possible, it is clear that much of the responsibility for the 1978 collapse of the talks with the Soviets must also rest with Carter Administration policy reversals. In particular, at the fourth negotiating round, the U.S. delegation was given instructions which directly contradicted the United States position at earlier rounds, namely that arms transfer restraint should be discussed on a regional basis. At the December 1978 round, the U.S.

Continued

delegation was instructed to discuss only Latin America and Africa, the "U.S. regions," and to break off negotiations if the Soviet delegation mentioned any others. This policy reversal was apparently due to a bureaucratic struggle within the Carter Administration, which resulted in the President's decision not to permit discussion of the Far East or Middle East.

Those who prevailed in the bureaucratic battle convinced the President that the U.S. had nothing to gain in bargaining with the Soviets in these areas. In the Far East, it was expected that the Soviets would raise the issue of arms sales to Korea, an important ally which depended upon the U.S. for most of its arms. A second major concern was that a discussion of limiting Far East sales might complicate the [illegible] negotiations over normalization of relations with the People's Republic of China, then in the final stages. There was agreement within the bureaucracy that the U.S. should not discuss sales to the People's Republic of China. But, in addition, members of the National Security Council Staff and the limited number of people negotiating normalization of relations with the PRC were distressed about the possibility of the Soviets even raising the China sales issue. Zbigniew Brzezinski, the President's National Security Advisor, reportedly was adamant that this not occur. In the Middle East, there was concern that a discussion of arms sales would focus on Iran and accelerate the deteriorating position of the Shah, or focus on Saudi Arabia and undermine our delicate economic relations there. Not surprisingly, the Soviets refused to agree to the U.S. agenda, namely, a discussion of Latin America and Africa only.

Conclusion

It is unlikely that CATT will be revived. The Soviet invasion of Afghanistan has created a climate which makes any formal arms control negotiation with the Soviets unlikely. Moreover, both the invasion and collapse of the initial CAT negotiations have placed increased pressure on the Carter unilateral restraint policy, a policy being eroded by events in any case. There is a growing concensus in Washington that the ceiling approach has failed. As noted, the Administration now supports the development of weapons solely for export. The growing pressure to strengthen NATO capabilities may weaken the prohibition on third party transfer of weapons. Since the NATO allies anticipated recovering much of their costs through exports, they have indicated they would be less willing to enter into standardization agreements, long a U.S. goal for NATO, if the U.S. prohibits third country transfers.

In conclusion, it can be said that the Carter restraint effort was a victim of two conflicting demands; a demand for limited use of arms transfers as an instrument for foreign policy and the increased international demand for arms transfers. It also appears the promoters of restraint only partially defined the problems of arms transfers. To be sure, arms transfers of certain types, to certain regimes or to certain regions could be dangerous for world stability and for U.S. national interests. It is also true arms transfers have not provided the United States with the access or influence often claimed by previous administrations. But the problem was greater than these dangers: arms transfers had assumed a centrality in American foreign policy because the United States had so few other instruments to promote foreign policy goals.

Increasingly, the one tangible and salient way the United States could or would demonstrate commitment to Iran, Saudi Arabia, Israel, Egypt, Jordan, South Korea, Pakistan, Taiwan, Spain and Turkey, to name a few friendly countries, was through arms transfers. The one way the United States could get agreement among conflicting nations was to promise arms as compensation for concessions made. The aid promised Egypt and Israel after the Camp David Accords is a prime example. A major instrument by which the United States could encourage moderation in oil pricing policy was to deliver arms to those nations who had the power to limit prices. Similarly, one means by which the United States could offset international payments deficits with oil producing countries was to trade items those countries desired for the oil we desired. Increasingly, arms transfers became a major means of countering Soviet penetration in Africa and Asia and for discouraging certain nations from developing nuclear weapons.

The haunting question for the Carter Administration, then, was what other instruments could be used as effectively as arms transfers to deal with the growing list of international problems the United States confronted. Despite his desire for restraint and his public and diplomatic support for restraint, the President learned that, because of the limited number of instruments available to him, arms transfers were simply too useful to be extensively curtailed.

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Council on Economic Priorities
NEWSLETTER
December/January 1981-2
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WEAPONS FOR THE WORLD

1982 Update: The Corporate Role in Foreign Arms Transfers

NEWSLETTER SUMMARY

By William Hartung

During its first year in office, the Reagan Administration has made the sale or loan of US arms abroad a principal tool in its emerging foreign policy. The new emphasis threatens to expand the size and scope of these US arms transfers to unprecedented levels.

The commitment can be found in the Reagan Fiscal Year (FY) 1982 budget, which proposes $6.9 billion for security assistance programs: The figure represents a 30 percent increase over FY 1981. Reagan's proposed program of US government military credits offers interest rates as low as 3 percent to such countries as Egypt, Sudan, Turkey, Thailand, and Portugal.

Government Facilitates Foreign Sales

The Administration has pushed for greater flexibility in securing arms transfers. Undersecretary of State James Buckley has eliminated the "leprosy letter," a State Department regulation that prohibited US embassy and military personnel from actively promoting the sale of US weapons to foreign countries. President Reagan has reversed a Carter administration policy by issuing a new Presidential Directive on arms transfers that enables US firms to design weapons *solely* for export. Congress is now acting on proposals to facilitate light weapons transfers, to lift restrictions on sales and aid to Pakistan and Argentina, and to establish three new security assistance funds which the President could use at his discretion.

Foreign Sales Opposition Appears

Despite the momentum gathered behind Reagan's foreign arms transfer policies, signs of opposition are appearing: The near veto of the $8.5 billion Saudi AWACS deal and growing Congressional support for human rights conditions on FY 1982 military aid to El Salvador both indicate that the Administration may not get all the flexibility it desires in arms transfers. A US offer of 100 Trident submarine ballistic missiles to the United Kingdom also faces stiff opposition. A recent poll showed that a majority of the British population opposes the sale.

Defense Data Shows Record Growth

Highlights of 1980 foreign military sales include the following:

- The Pentagon awarded a record $8.1 billion in contracts to US and foreign business firms in FY 1980 under its Foreign Military Sales (FMS) program. The figure was up from $5.3 billion in FY 1979.
- General Dynamics, producer of the F-16, regained its position as the number one FMS contractor in FY 1980, after falling to second position in FY 1979. McDonnell Douglas fell to fourth after being number one in FY 1979.
- Growing sales of Chrysler's M-60 tank to Middle Eastern nations placed it 10th among FMS contractors in FY 1980. The company had not been among the top 25 since 1976. ■

> ***"...The new emphasis threatens to expand the size and scope of US foreign arms sales and loans to unprecedented levels..."***

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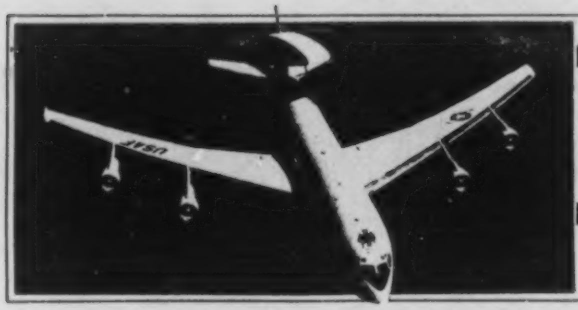

The sale of AWACS radar aircraft (like that pictured above) to Saudi Arabia represents a major step towards an increased US military presence in the Middle East.

The US Contribution to International Arms Proliferation

*"The basic thrust of the administration's policy is that arms transfers, properly considered and employed, represent an indispensable instrument of American policy that both complements and supplements the use of our own military forces." —**James Buckley, Undersecretary of State for Security Assistance.***

In keeping with that basic thrust, the Administration has proposed $6.9 billion in security assistance funds for Fiscal Year (FY) 1982, a 30 percent increase over FY 1981. It has also begun streamlining the process of marketing arms overseas. Both actions represent a major shift in how US foreign policy is administered, and both will certainly work to increase stockpiles of weapons the world over.

Proposed procedural and legislative changes that will facilitate overseas marketing of US weapons range from dropping restrictions on arms transfers to Argentina, Guatemala, and Pakistan, to instituting concessionary credit terms for sales to countries that would otherwise be unable to afford weaponry (see "Key Points of Reagan's Arms Transfer Policy").

FMS Under Carter

During the last year of the Carter Administration, orders for US weaponry under the Foreign Military Sales (FMS) program were already a high $15.3 billion, only $700 million less than the record reached during the Ford Administration. Commercial exports, the other major channel for US arms transfers, hit a record $1.7 billion that year. Total transfers through all major channels (FMS, commercial exports, and the Military Assistance Program) during the *four years* of the Carter Administration's "arms restraint" policy were only a few billion dollars less than the total transfers made by the US for the *twenty years* from 1950 to 1970.

Soviet Dominance Disputed

Undersecretary of State Buckley justifies a more aggressive arms transfer policy by noting that Soviet transfers of advanced weaponry to Third World nations over the past four years "have surpassed those of the West by impressive margins." Yet data collected by the Stockholm International Peace Research Institute (SIPRI) for its 1981 *World Armaments and Disarmament Yearbook* contradict this claim. For the four years from 1977-1980, SIPRI figures show that the United States made 38% of all major weapons exports (aircraft, missiles, armored vehicles, and warships) to the Third World. During this same period the Soviet Union made 32% of such exports. More striking still, SIPRI found that NATO exports were 68% of the world total for 1977-1980, while Warsaw Treaty Organization exports accounted for 28% during that period. Seen in perspective, the Reagan arms transfer policy represents a move towards expanded arms sales by a nation which is already the world's leading supplier.

U.S. Arms Transfers To Five Areas Of The World

The Mideast: Still the Largest US Market

Shipments of the most sophisticated US weaponry to Middle Eastern nations still account for the bulk of US transfers. In this area Reagan policy makers are building on foundations laid during the Carter term.

Saudi Arabia has become the principal customer for US arms since the Shah of Iran's overthrow. The country ordered more than $4 billion in US weaponry in each of fiscal years 1980 and 1981. To those sales, the Reagan Administration has added an offer of

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Council on Economic Priorities
NEWSLETTER

Editor-in-chief: Alice Tepper Marlin **Managing Editor:** Geoffrey Quinn
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five Airborne Warning and Control Systems (AWACS) radar planes and additional fuel tanks and missiles for the Saudi's F-15s. The entire package, including training and support services, is estimated at $8.5 billion. The State Department's justification for continuing large sales to Saudi Arabia hinges on both economic and political considerations:

> "Saudi Arabia is vital to the US as the largest source of oil for the West and a force for moderation in the region. . . Strongly anti-communist, it uses its influence and financial resources to resist the spread of radical ideologies within the Middle East and elsewhere."
>
> (US Dept. of State, *Congressional Presentation Document on Security Assistance Programs, FY 1982)*

In a hard-fought administration victory, this reasoning and heavy White House lobbying turned many congressional opponents around. Originally a majority of both houses of Congress had opposed the AWACS deal.

Israeli Policy Re-examined

Israel's use of U.S. supplied aircraft in its raid on the Osirak nuclear reactor project in Iraq, and in continuing raids on Lebanon, have once again raised the issue of how that country may employ US weapons. Following the Osirak raid, a scheduled U.S. delivery of 14 F-16s and 2 F-15s to Israel was suspended for ten weeks, so that the State Department could study the bombing raid to determine whether or not it violated the agreement that U.S. weapons be used for "defensive purposes" only. In mid-August of this year, the Reagan Administration lifted the ban on the shipment of the planes without ruling on whether or not the Osirak raid was within legal bounds.

The Reagan Administration plans to supply Israel with $1.4 billion in FMS financing for FY 1982. The U.S. will also continue construction of two air bases in Israel to replace the two Sinai bases which were ceded to Egypt as part of the Camp David accords.

Egypt, using the last of the military credits granted under the Camp David accords, ordered advanced U.S. weapons including 311 M-60 tanks, 550 M113 armored personnel carriers, and 40 F-16 fighter aircraft during FY 1980. Reagan projections for FY 1982 call for $900 million in new FMS credits for Egypt. As U.S. arms transfers to Egypt have grown, so have other forms

(Continued Page 4)

Table I
Top 25 FMS Contractors, FY 1980
(in thousands of dollars)

	1980	1979* (Rank)
1. General Dynamics Corp.	$ 992,958	$ 517,998 (2)
2. Northrop Corp.	859,401	472,282 (3)
3. United Technologies Corp.	749,047	249,048 (5)
4. McDonnell Douglas Corp.	471,238	638,853 (1)
5. Raytheon Co.	435,468	132,113 (8)
6. Sam Whan Corp.	266,306	*
7. FMC Corp.	232,933	65,267 (20)
8. Hani Development Co. Ltd. and Al Mabani Joint Venture	217,558	*
9. Harsco Corp.	205,393	70,508 (19)
10. Chrysler Corp.	197,089	*
11. General Electric Co.	175,597	101,442 (13)
12. Mi Ryung Construction Co. Ltd.	171,340	*
13. Lockheed Corp.	148,536	141,812 (7)
14. General Agencies and Sam Whan Joint Venture	144,306	*
15. Westinghouse Electric Corp.	140,101	85,266 (15)
16. Boeing Co.	131,542	*
17. Saudi Maintenance Co. Ltd.	128,834	*
18. General Motors Corp.	109,071	50,692 (25)
19. Teledyne Inc.	108,541	53,237 (23)
20. Hughes Aircraft Co.	95,533	86,423 (14)
21. Textron, Inc.	81,980	109,158 (10)
22. American Telephone and Telegraph Co.	78,773	61,832 (21)
23. Sperry Corp.	72,705	75,138 (16)
24. Rockwell International Corp.	59,327	*
25. Hyundai Construction Co. Ltd.	58,338	290,486 (4)
Total, Top 25 Companies	$6,331,895	$3,984,775
Total FMS Awards	$8,157,571	$5,328,676

*Not among top 25 FMS contractors during FY 1979.
Source: "Foreign Military Sales, Top 25 Companies and Their Subsidiaries Ranked According to Net Value of Military Prime Contract Awards," for Fiscal Years 1979 and 1980. Chrysler contracts for FY 1979 are from the DoD Public Affairs division.

DoD contracts under the Foreign Military Sales (FMS) program valued at over $8.1 billion in Fiscal Year (FY) 1980, up from $5.3 billion in FY 1979, and more than 40 percent higher than the previous records level of FMS contract awards reached in FY 1978. The top 25 FMS contractors received 77.6 percent of all awards in FY 1980.

1) **General Dynamics:** Continuing work on 348 F-16s for four NATO nations and 75 F-16s for Israel accounted for the bulk of the company's FMS contracts in FY 1980. Orders for F-16s by Egypt (40) made under the Carter Administration, and new offers F-16s by the Reagan Administration to South Korea, Pakistan, and Venezuela should keep FMS contract revenues from this program high in coming years. Also during 1980, 4 General Dynamics F-111A aircraft were offered to Australia.

2) **Northrop:** Northrop remained heavily dependent on FMS awards, which equaled more than half of the firms total sales for 1980. The company's "Peace Hawk" support and technical services program in Saudi Arabia, which has been renewed through 1982, was its most lucrative foreign program in FYI 1980, followed by contracts for its F-5E/F fighters. Revenues from F-5 sales are less than half of what they were three years ago, spurring Northrop to put substantial research funds into its new F-5g series export fighter. Offers of F—E/Fs went to Morocco (20), Switzerland (36), Singapore (6), and Malaysia (2 reconnaissance versions)

(Continued Page 4)

of military cooperation. The most notable example was the November 1980 "Bright Star" exercise in which U.S. and Egyptian troops practiced the "rapid deployment" concept in the Sahara desert. An expanded exercise employing 5,000 U.S. troops and the armed forces of Egypt, Sudan, Somalia, and Oman was carried out this November.

Other nations cooperating with U.S. plans for the Rapid Deployment Force continue to be rewarded with U.S. military credits. Oman, Somalia, and Kenya each agreed to allow the U.S. to stockpile equipment for the Rapid Deployment Force on their territory during the last year of the Carter Administration. The Reagan FY 1982 security assistance proposals call for $51 million in credits to Kenya, $40 million to Oman, and $20 million to Somalia.

Latin America: Aid Spurs Debate

In one of its first major foreign policy initiatives, the Reagan Administration released a white paper contending that hundreds of tons of arms had been shipped to El Salvador. It termed these shipments a "textbook case" of indirect communist aggression. Secretary of State Alexander Haig stated at the time that "we have no choice but to act to prevent forces hostile to the U.S. and the West from overthrowing a government on our doorstep."

The white paper helped gain Congressional approval of an emergency $25 million aid package to the El Salvadorean military. The Reagan administration has proposed another $25 million in military aid for FY 1982. This, added to the $10 million in military aid supplied during the final months of the Carter Administration, amounts to some $60 million in U.S. military aid to El Salvador in fiscal years 1981 and 1982, four times the value of all U.S. arms transfers to El Salvador between 1950 and 1980. (For detailed breakdowns of the types of weaponry that the U.S. has supplied to El Salvador,

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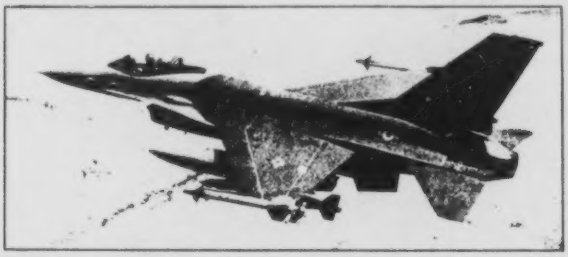
Top Ten Companies Make Record Gains



The US has offered sophisticated F-16 jets (above) to South Korea and Pakistan, and may offer the fighters to Venezuela as well.

during FY 1980. A formal offer was made to South Korea of equipment necessary for its co-assembly of 68 F-5E/Fs. Early in 1981, an order of 12 FSE/Fs by Mexico was announced.

3) **United Technologies:** Pratt & Whitney division engines for the F-15, F-16, A-4, and F-111A provide the main source of FMS awards for United Technologies. In 1980, Saudi Arabia ordered 14 complete F-100 engines and 71 engine modules as additional spares for the 60 F-15s they have ordered.

4) **McDonnell Douglas:** In addition to work on orders for the F-15 for Israel and Saudi Arabia, major new offers of McDonnell Douglas equipment during the year 1980 included Harpoon missiles to Japan (26), Greece (32), and Denmark (15), 2 F-15s to serve as back-up to the original Saudi order of 60, and 88 A-4 aircraft to Malaysia. One recent large order for McDonnell Douglas aircraft, 137 F/A-18s for $2.2 billion by the government of Canada, was made through commercial channels, and therefore will not be reflected in FMS contract award figures. The decision by Australia to buy 75 F/A-18s for $2.5 billion will mean growing FMS awards in coming years.

5) **Raytheon:** During 1980, sales and support for Improved Hawk missile systems for Egypt, Taiwan, Singapore, and Kuwait formed the major part of Raytheon's foreign business. Coproduction of the Improved Hawk and Seasparrow missile systems with NATO nations continued, and a contract was signed for the sale of AIM-7F Sparrow missiles to Japan. New offers of Sidewinder missiles were made to Oman (250), Switzerland (1,000), Greece (300), Saudi Arabia (660), and Canada (182).

6) **Sam Whan Corporation:** Sam Whan is a South Korean firm which works under Pentagon contract on a number of the 15 major military construction projects currently underway in Saudi Arabia.

7) **FMC Corporation:** Increasing orders for FMC armored vehicles, particularly the M113 personnel carrier, more than tripled FMS awards to the firm during 1980. During 1980 M-113s were offered to Lebanon (70), Egypt (550), Sudan (80), Kuwait (52), and Greece (12).

8) **Hanil Development Co. and Al Mabani Joint Venture:** Hanil Development of South Korea is working with Al Mabani, a Saudi Arabian firm, on military construction projects in Saudi Arabia.

9) **Harsco Corp.:** The Bowen-McLaughlin York division produces the M109 and M110 155mm self-propelled howitzers, and the M88 tracked recovery vehicle. M88 vehicles were offered to Israel (25) and Egypt (43) during 1980; M-109 howitzers were offered to Jordan (78), United Kingdom (51), Austria (18), and Taiwan (25), and M110s were offered to Jordan (29) and Taiwan (50).

10) **Chrysler:** As it enters full production of the new M-1 Abrams tank for the U.S. army, Chrysler's continued production of the M-60 tank has become totally dependent on foreign sales, particularly sales to the Middle East. Offers of M-60s were made to Israel (300), Egypt (311), and Jordan during 1980. Early in its term, the Reagan Administration announced its intention to sell M-60s to Morocco.

see "Background Information on El Salvador and U.S. Military Assistance to Central America," Institute for Policy Studies, 1901 Que Street, Washington, D.C. 20009.)

Although the U.S. State Department has attributed violence in El Salvador to groups from the "extreme right" and "extreme left", reports of continuing repression by El Salvador's government have prompted widespread opposition to the Reagan Administration's program of stepped up military aid.

The Carter Administration actually did limit arms transfers to Latin America, partly as an expression of its own policy, and partly as a result of pre-existing congressional restrictions on aid to countries whose governments have systematically violated human rights (e.g., Chile and Argentina).

The Reagan Administration has reversed this trend. To date, Reagan has cleared a sale to Ecuador of Israeli Kfir fighter planes (equipped with General Electric engines) which Carter had vetoed. Venezuela may be offered F-16s, in the first offer of this sophisticated aircraft to a Latin American nation. The Administration has proposed *$50 million* in FMS sales to Brazil for FY 1982, more than *fifteen times* Carter's FY 1981 level. The Reagan State Department has approved the sale of 50 two-and-one-half ton trucks and 100 jeeps to Guatemala, a decision that Congressional human rights advocates say violates the spirit, if not the letter, of current law. In the most significant shift in arms transfer policy toward Latin America, the Reagan Administration is calling for the repeal of section 620B of the Foreign Assistance Act, which prohibits all arms transfers to Argentina because of the Argentinian government's record of systematic human rights violations.

North Africa: Sales Expanded

Morocco, which is involved in a war of annexation against the Polisario Liberation Front in the Western Sahara, ordered a record $321 million in arms under the U.S. FMS program in FY 1980, including orders of Rockwell OV-10 counterinsurgency aircraft, Northrop F-5E/F fighter planes, and Hughes 500MD helicopters. The U.S. demonstrated its continuing commitment to King Hassan when it offered Morocco 108 Chrysler M60 tanks early in the Reagan term.

Tunisia and Sudan are each receiving substantial new arms commitments under the Reagan FY 1982 security assistance proposals. The U.S. will send Tunisia $95 million in guaranteed loans to finance purchases under the FMS program, and Sudan is scheduled for $100 million in direct FMS credits.

Asia: China, Pakistan Courted

The Reagan Administration's proposal of $3.2 billion in military and economic aid to Pakistan over the next six years is one of its most substantial new arms offers. In addition to the $3.2 billion package, Pakistan has been offered 40 F-16s for $1.1. billion through the U.S. FMS program. Resumption of aid to Pakistan will require its exemption from the Symington Amendment to the Foreign Assistance Act, which bans military aid to countries believed to be engaged in nuclear weapons research and development. The Senate Foreign Relations Committee voted in May to exempt Pakistan from this law, but a final determination is yet to be made.

South Korea, which had been denied F-16 aircraft by the Carter Administration because the range and electronic sophistication of the planes was considered beyond their need, has been formally offered 36 F-16's by the Reagan Administration.

Expanding on policy decisions made under the Carter Administration, Secretary of State Alexander Haig announced during his trip to China in June that Chinese military leaders could submit a list of U.S. weapons they wish to purchase. This offer was a significant step beyond earlier proposals which allowed for sales of U.S. computers, helicopters, and transport planes to China. No concrete sales

(Continued Page 6)

Arms Transfers Explained

US arms proceed to foreign countries through three main channels, the foreign military sales (FMS) program commercial exports licensed under the Arms Export Control Act, and the Military Assistance Program. (MAP).

The FMS program is the principal channel for US arms transfers. It covers "government-to-government" sales of US weaponry or services. Classified or US government manufactured equipment can be sold only through FMS channels. Once the US and the foreign government have agreed on transfer terms, the Pentagon awards a contract for the weapons or services required.

Commercial military exports are direct sales by a US firm to a foreign government, licensed by the State Department. Major defense equipment worth less than $100 million may be sold in this way. NATO nations are exempted from the $100 million ceiling.

The Military Assistance Program provides grants to foreign governments of weapons and support services other than training. Once the main channel for US arms transfers, MAP grants have been progressively phased out. Only four countries—the Philippines, Portugal, Spain and Sudan—received grants of weaponry during FY 1981. No new country specific grants have been processed for FY 1982.

FMS financing has replaced MAP grants as the principal form of US military assistance. *Direct* FMS credits are low-interest US government loans to countries seeking weapons under this program. US government *guaranteed loans* also help foreign governments fund FMS purchases. These loans, offered through the Federal Financing Bank, require no direct budgetary appropriations. ■

". . . The US sent El Salvador $60 million in Military Aid last year, four times the total since 1950 . . ."

proposals resulting from the Haig offer have been announced.

Australia is a major U.S. arms customer in the South Pacific. The recently announced offer of 75 McDonnell Douglas F/A-18s to Australia for $2.5 billion is the largest arms deal in Australian history.

Europe: Opposition to US Missiles

The most significant and controversial U.S. arms bid to Europe is the offer of as many as 100 Trident submarine launched ballistic missiles to the United Kingdom. The deal, which could cost as much as $6 billion by the time it is completed, is opposed by a majority of the British population, according to a recent poll. Arguments against buying the Tridents have come from the Campaign for Nuclear Disarmament (CND) which opposes having any nuclear weapons on British soil or under British command and from military officials who have argued that the purchase of the Tridents will be so expensive that it will force severe cutbacks in the rest of the British Navy.

Other major offers to Europe during 1980 included a $153 million communications satellite (SATCOM) to NATO, and $600 million in equipment and technical support to help Spain produce three Perry class frigates and an anti-submarine warfare aircraft carrier. ■

Table II
The Top Ten FMS Contractors

(millions of dollars)

Fiscal Year	Total Sales	DoD Contracts (rank)	FMS Contracts (rank)	FMS as % DoD Contracts
General Dynamics				
1980	$ 4,743.0	$3,518.0 (1)	$992.956 (1)	28.2%
1979	4,060.0	3,492.1 (1)	517.998 (2)	14.8%
Northrop				
1980	$ 1,655.4	$1,227.4 (11)	$859.401 (2)	70.0%
1979	1,582.0	800.3 (13)	472.282 (3)	59.0%
United Technologies				
1980	$12,320.0	$3,108.9 (3)	$749.047 (3)	24.1%
1979	9,050.0	2,553.6 (3)	249.058 (5)	9.8%
McDonnell Douglas				
1980	$ 6,066.3	$3,246.6 (2)	$471.328 (4)	14.5%
1979	5,278.5	3,229.2 (2)	638.853 (1)	19.8%
Raytheon				
1980	$ 5,002.1	$1,745.1 (8)	$453.468 (5)	26.0%
1979	3,727.9	1,249.4 (9)	132.113 (6)	10.6%
Sam Whan Corp.				
1980	NA	$ 266.3 (46)	$266.340 (6)	100.0%
1979	*	*	*	* %
FMC Corp.				
1980	$ 3,482.2	$ 834.6 (17)	$232.933 (7)	27.9%
1979	3,307.5	352.1 (30)	65.267 (20)	16.0%
Hanil Development Co. and Al Mabani JV				
1980	NA	$ 217.6 (56)	$217.558 (8)	100.0%
1979	*	*	*	*
Harsco Corp.				
1980	$ 1,063.2	$ 280.3 (44)	$205.393 (9)	73.3%
1979	945.3	218.6 (43)	70.508 (19)	32.3%
Chrysler Corp.				
1980	$ 9,225.3	$ 970.9 (13)	$197.089 (10)	20.3%
1979	12,001.9	808.9 (12)	33.932 *	4.2%

*Not among top ten FMS contractors during FY 1979.

Sources: Company 1980 Annual Reports; The Defense Department's Top 100 (CEP Newsletter 0-7); and Table I of this Newsletter.

THE DEFENSE MONITOR

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U.S. WEAPONS EXPORTS HEADED FOR RECORD LEVEL

Defense Monitor in Brief

- President Reagan has eliminated nearly all restraints on U.S. weapons exports. The United States will soon be shipping more arms, and more advanced weapons, to more nations than ever before.
- In President Reagan's first year in office, he recommended to Congress arms sales to foreign countries totaling over $25 Billion. U.S. weapons exports in Fiscal Year 1982 may exceed $30 Billion, surpassing by a substantial margin those of any previous year in U.S. history.
- Over the past decade, the United States has provided weapons and military services totaling more than $123 Billion to about 130 of the world's 161 nations.
- Of the forty-one military-dominated governments in the world with a record of violating citizens' rights, the United States has been a major supplier of arms to twenty-eight.
- The United States continues to be the world's number one supplier of weapons to other nations. The U.S. and its allies supply far more weapons to the Third World than does the Soviet Union and its allies.

The Reagan Administration's preoccupation with Soviet military power and influence has manifested itself in three ways: rapidly rising military spending, expanded nuclear weapons programs and increased weapons exports. Arms sales and military aid have come to dominate American foreign policy to an unprecedented degree.

Both the rhetoric and the actions of the current Administration confirm that it perceives weapons sales and other forms of military assistance as one of, if not *the* most important and effective means of achieving U.S. objectives and gaining influence around the world.

Although the U.S. exported over $55 Billion of weapons during President Carter's four years in office (more than any other nation), the Reagan Administration has criticized Carter for failure to sell enough weapons to foreign countries. Weapons exports are now viewed as "an increasingly important component of our global security posture and a key instrument of our foreign policy." There has been a shift from a policy of nominal restraint to one of open promotion of arms sales abroad.

In his first year in the White House President Reagan:

- recommended to Congress over $25 Billion in arms sales to foreign countries;
- ramrodded the largest arms sale ever through a reluctant Congress (an $8.5 Billion deal with Saudi Arabia for AWACS aircraft, Sidewinder missiles, aerial tankers and auxiliary fuel tanks for F-15 fighter aircraft);
- approved for the first time the sale of lethal military equipment to the People's Republic of China;
- approved a $615 million sale to Venezuela of 24 F-16 fighter aircraft (the first sale by the U.S. of highly advanced jet aircraft to any Latin American country);
- approved a $1.1 Billion deal with Pakistan for 40 F-16s (another $1.6 Billion in military loans to Pakistan is planned for the next five years);
- convinced Congress to increase U.S. military aid to foreign governments at the same time as cuts are being made in U.S. domestic social programs;
- convinced Congress to repeal prohibitions on U.S. military aid to Pakistan, Argentina and Chile.

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Types of U.S. Weapons Exports

U.S. weapons exports currently take two forms: military cash sales and military aid. There are two types of military cash sales: private commercial sales and government Foreign Military Sales (FMS). There are three main types of military aid: credits (or loans) extended through the Foreign Military Sales financing program, grants made through the Military Assistance Program (MAP), and grants made through the International Military Education and Training (IMET) program.

Cash Sales

- *Commercial.* Commercial military sales are made directly between private American arms corporations and foreign governments or firms. All commercial sales require an export license from the State Department's Office of Munitions Control. Commercial sales tend to be the nuts and bolts of military hardware: spare parts, ammunition, pistols, rifles, helmets, protective personnel equipment, etc. Commercial sales totaled $10.2 Billion in the 1970's and $2.1 Billion in FY 1981.
- *Foreign Military Sales.* Through the FMS program, the U.S. Government generally acts as a middleman, buying arms from an American manufacturer and reselling them to a foreign government. The U.S. also provides technical assistance and a variety of design, construction, training, management and support services through the FMS program. For FMS cash sales, the foreign government makes a deposit in advance, held by the U.S. Treasury in a trust fund, sufficient to cover all costs and damages associated with the sales agreement. The U.S. Government then pays contractors on behalf of the foreign nation. U.S. FMS cash sales totaled $77.9 Billion in the 1970's and $7.6 Billion in FY 1981.

Military Aid

- *Loans.* The U.S. Government extends credits, or loans, to foreign governments through the FMS financing program to enable them to pay for American weapons. The loans are usually made at the average longterm borrowing rate to the U.S. Treasury, plus a 1/8th of 1% administrative fee, with a grace period of one to three years and a repayment period of nine to twelve years. FMS loans totaled $15.6 Billion in the 1970's and $919 million in FY 1981.
- *Grants.* Grant military aid is appropriated by Congress and comes from general tax revenues. Under the Military Assistance Program, the U.S. provides many types of military equipment and services free of charge to foreign nations. The MAP program is being phased out and in recent years has consisted mainly of wind-up deliveries of previous years' agreements. MAP agreements totaled $14.6 Billion in the 1970's and $170 million in FY 1981.

Under the IMET program, the U.S. trains and instructs foreign military personnel in the U.S., the American Panama Canal Area schools and in foreign countries. Over the past 30 years, nearly 500,000 foreigners have been taught American military strategy, tactics and doctrine through the IMET program. The IMET program totaled $392 million in the 1970's and $28 million in FY 1981.

There are two other types of grant aid. Under the Peacekeeping Operations (PKO) program, the U.S. provides money for multi-national peacekeeping force expenditures in Cyprus and the Sinai. In 1980, the U.S. allocated $25 million for the PKO program. Another type of grant military aid is the practice of waiving payment on loans made under the FMS financing program. From 1974 to 1980, the U.S. waived payment on $4.45 Billion of loans to Israel. In FY 1982, payment will be waived for the first time to a country other than Israel: $200 million for Egypt and $50 million for the Sudan.

Exports Skyrocket in 1970's

Throughout the 1950's and 1960's the vast majority of American weapons exports were made free of charge to the recipient under the Military Assistance Program (MAP). A combination of factors—the strengthening of our allies' economies, strains in the U.S. economy, the bankruptcy of the huge American grant military aid program in South Vietnam— led to a fundamental shift in the early 1970's. Since then, most U.S. arms exports have been made through the Foreign Military Sales (FMS) program. Under the FMS program, foreign countries either pay for U.S. weapons in advance or are extended loans, usually at favorable terms.

Under the new setup, American arms transfers have skyrocketed. From 1972 to 1975, U.S. foreign military cash sales jumped 445%, from less than $3 Billion to nearly $16 Billion. During the same period, U.S. military aid fell from $4 Billion to $1.9 Billion.

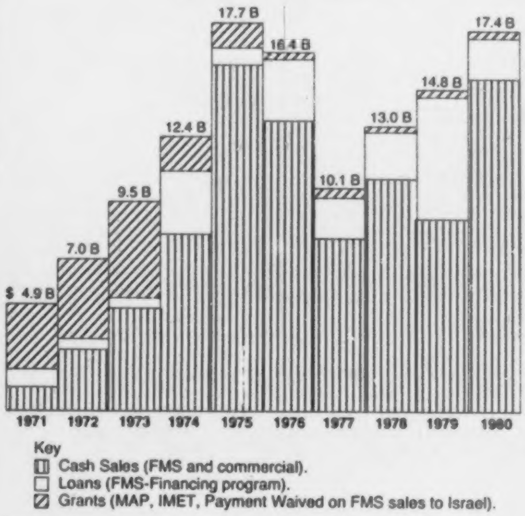
This rapidly expanding arms trade raised concerns on Capitol Hill and elsewhere. Congress passed in 1976 the Arms Export Control Act (AECA). The intent to limit U.S. arms exports is evident from the name of the act, as compared to its predecessor, the Foreign Military Sales Act.

Carter's Policy

President Carter came to office pledging to reduce the quantity and quality of U.S. arms transfers and to take into greater account the human rights record of the recipient nation, the recipient's ability to afford and to absorb U.S. weapons, and the seriousness of the military threat to the recipient.

The Carter Administration turned down over $1 Billion in requests for arms from more than 60 nations, cut off or significantly reduced U.S. military assistance to over a dozen regimes recognized as consistent and

THE U.S. ARMS THE GLOBE:
$123 Billion in 10 Years



Note: Figures are then-year dollars.
Source: DoD
Chart prepared by the Center for Defense Information.

gross violators of human rights and initiated the Conventional Arms Transfer limitation talks with the Soviet Union.

But President Carter's actions did not fully match his words. After a sharp drop of over $6 Billion in 1977, American weapons exports rose from $10.1 Billion to the near-record level of $17.4 Billion in 1980. About $40 Billion in arms were sold to Third World countries during the Carter Administration, including controversial sales to Iran and Saudi Arabia.

In fact, President Carter left President Reagan a $55 Billion backlog of undelivered orders for U.S. weapons and military services. Deliveries on those orders will stretch throughout the decade.

TWO VIEWS

"The United States will henceforth view arms transfers as an exceptional foreign policy implement, to be used only in circumstances where it can be clearly demonstrated that the transfer contributes to our security and the security of our close friends."

President Jimmy Carter
May 1977

"The United States therefore views the transfer of conventional arms . . . as an essential element of its global defense posture and an indispensable component of its foreign policy."

President Ronald Reagan
July 1981

The New Reagan Policy

A comparison of Carter's Arms Transfer Policy Directive of May 1977 and Reagan's of July 1981 is revealing. Reagan has:

- abolished the "ceiling" on the total dollar value of U.S. arms transfers authorized each year;
- dropped the prohibition on developing a weapon system solely for export;
- dropped the prohibition against introducing a newly developed, advanced weapon system creating a significantly higher combat capability into a region;
- dropped the prohibition against making foreign sales prior to operational deployment with U.S. forces;
- rescinded Carter's so-called "leprosy letter" which instructed U.S. overseas officials not to assist private American businessmen seeking to promote arms sales;
- de-emphasized human rights considerations (Under Secretary of State for Security Assistance James Buckley has called Carter's human rights restrictions "self-inflicted injuries").

One need look no further than the two guiding principles of the Reagan Administration to understand his arms transfer policy: confront the U.S.S.R. and help big business.

Secretary of State Alexander Haig and Under Secretary Buckley have repeatedly stressed that the reason for the new arms transfer policy is the increasing aggressiveness of the Soviet Union and its "proxies," and expanding Soviet arms transfers and military power.

Reagan officials have also trumpeted the economic benefits of increased arms sales: the American defense industry will reap record profits; U.S. Gross National Product will rise; the U.S. balance of payments ledger will improve; jobs will be generated; the Pentagon can recoup research and development expenditures and can reduce the per unit cost of its weapon systems through economies of scale.

The Reagan Administration's arms transfer policy is a combination of anti-Soviet scare tactics and a listing of the alleged benefits of expanded weapons exports. It reflects the same preoccupation with the Soviet Union which has been used to frighten Americans into spending increasing Billions of dollars on weapons.

Reagan's First Year

Some have speculated that the difference in U.S. weapons exports under Reagan and Carter may turn out to be more rhetorical than real. Despite Carter's negative approach, exports rose. Reagan officials have tried to turn aside criticism by stating that arms exports are not likely to rise drastically, if for no other reason than the depressed state of the world economy.

For example, figures just released by the Department of Defense show that U.S. weapons exports totaled $10.8 Billion in Fiscal Year (FY) 1981, the lowest total since 1977. Secretary Buckley told Congress in July 1981 that the Administration anticipates that FY 1982 foreign military sales agreements will total about the same as in FY 1980, or $15 Billion.

In fact, the FY 1981 figure is misleadingly low and the FY 1982 level of U.S. arms exports is likely to be the highest in American history. Reagan's arms transfer policy is certain to make a significant difference in the level of U.S. arms sales and aid, as well as in the type of weapons sold and the recipients of U.S. weapons.

The FY 1981 arms export level is misleadingly low for several reasons. First, the FY 1981 level still reflects the policies of President Carter. (Carter was still in office for almost the first four months of FY 1981—October 1980 through January 1981.) Major arms sales take such a long time to formulate that it was not easy for the Reagan Administration to get a signed agreement on any significant arms deal unless it was originated during the Carter years.

Second, after assuming office, President Reagan deferred pending arms sales until a review could be undertaken, thereby slowing up the works. Some of the major deals that the Carter Administration had scheduled to be offered in FY 1981 did not make it until FY 1982, as was the case with the sale of AWACS and F-15 enhancements to Saudi Arabia and F-18 aircraft to Australia. Third, some of the big deals offered in FY 1981 were not signed by the recipient until FY1982 (e.g., the $900 million sale of 36 F-16s to South Korea), or have still not been signed.

A better measure of the impact of Reagan's liberal arms transfer policy is the value of foreign military sales *proposed* by Reagan during his first year in office: $25.3 Billion. The $25.3 Billion represents sales sent to Congress for approval, not formal offers or final sales.

REAGAN'S FIRST YEAR:
$25 BILLION IN ARMS SALES PROPOSALS

Recipient	Value	Comment
Saudi Arabia	$13,817 m.	5 E-3A AWACS aircraft, 8 KC-707 tanker aircraft, 1,117 AIM-9L AAMs, 202 conformal fuel tanks for F-15s ($8.5 B.); design, construction, training and support services for Royal Saudi Navy ($4 B.) management and services for operation of 500-bed hospital ($900 m.); other.
Australia	$2,344 m.(+)	Equipment and services for Follow-On Destroyer Program ($1.2 B.); technical assistance for development, design and construction of an aircraft carrier ($1 B.); other, including 3 classified sales.
Pakistan	$1,519 m.	40 F-16 fighter aircraft ($1.1 B.); 179 howitzers ($175 m.); 100 M-49 tanks ($117 m.); 10 AH-1S helicopters ($82 m.); other.
South Korea	$1,102 m.	36 F-16 fighter aircraft ($900 m.); logistics support, spares and supplies ($110 m.); other.
United Arab Emirates	$828 m.	7 Improved-HAWK batteries, 343 missiles ($800 m.); other.
Spain	$808 m.	Shipboard ASW electronic suites, 18 SH-60B LAMPS III helicopters ($510 m.); 96 Improved-CHAPARRAL Air Defense systems, 1,760 missiles ($272 m.); other.
Venezuela	$655 m.	24 F-16 fighter aircraft ($615 m.); 2 C-130 transport aircraft ($40 m.).
Norway	$550 m.	32 ROLAND II fire units, 782 missiles ($550 m.).
Japan	$513 m. (+)	4 E-2C reconnaissance aircraft ($270 m.); 1 TARTAR and 1 HARPOON launching system ($76 m.); 4 PHALANX weapon systems ($63 m.); other, including one classified sale.
Austria	$500 m.	24 F-16 fighter aircraft ($500 m.).
Others	$2,686 m.	
TOTAL	$25,333 million	

Note: Values represent sales sent to Congress for approval, not formal offers or signed agreements.
Values do not include commercial sales or grant aid.

Source: DoD and Senate Foreign Relations Committee.

Chart prepared by the Center for Defense Information.

The $25.3 Billion figure is incomplete in that it does not include seven classified sales, sales of such small dollar value that they did not require Congressional review, U.S. grant military aid, or private commercial sales.

Reagan's new arms transfer policy, combined with the circumstances leading to the artificially low arms export total in FY 1981, is certain to result in a record high level in FY 1982. The Department of Defense is now projecting that FMS sales will total $25 Billion in FY 1982. Given the Pentagon's past history of underestimating arms sales levels, and taking into account an estimated $3 Billion in private commercial arms sales and $1 Billion in U.S. grant military aid for FY 1982, the total arms export figure may exceed $30 Billion. The previous record year was 1975 when U.S. arms exports totaled $17.7 Billion.

Preliminary statistics reveal that for the first quarter of FY 1982, U.S. foreign military sales agreements totaled $6 Billion. That figure does not include the $8.5 Billion sale to Saudi Arabia and the $615 million sale to Venezuela which have been approved by Congress but not yet formally offered to and signed by those nations. It also does not include several major deals which are in the works, such as an estimated $5 Billion sale of 291 fighter aircraft to Turkey. Greece and Spain have also expressed interest in large buys of U.S. F-16 or F-18 fighter aircraft.

Reagan Boosts Military Aid

Like U.S. military cash sales, U.S. military aid (i.e., grants and loans) is increasing rapidly. The military aid level proposed by Reagan for FY 1982, then altered slightly by Congress, is more than four times that of FY 1981: $4.7 Billion vs. $1.1 Billion. In getting the first foreign aid bill passed in three years, the President convinced Congress to accept his proposals for boosting military aid at the expense of economic aid, for increasing the Executive Branch's freedom of action in the arms transfer process at the expense of the Legislative Branch, and for establishing a stockpile of U.S. weapons for use by foreign nations.

In FY 1982, the United States is going to waive payment on military loans to a country other than Israel for the first time: $200 million for Egypt and $50 million for Sudan. Special repayment terms— a ten year grace period followed by a 20 year repayment period instead of the usual one to three year grace and nine to twelve year repayment— are being offered to five nations: Egypt, Greece, Somalia, Sudan and Turkey.

At a time when drastic cuts are being made in domestic programs, many Americans question increasing U.S. hand-outs to foreign governments. U.S. taxpayers may object to further subsidization of the military purchases of foreign countries. In general, foreign buyers should be expected to obtain commercial credit for purchase of weapons and not be granted U.S. Government loans on favorable terms at the expense of the U.S. taxpayer.

In passing the foreign aid bill, Congress agreed to several measures which will reduce its own role in the arms transfer process. The value of sales which must be presented to Congress for review has been raised from $25 million to $50 million (or from $7 million to $14 million if major defense equipment is involved). For sales to NATO nations, Japan, Australia and New Zealand, Congress has reduced the notification period from 30 to 15 days and waived the informal 20 day prenotification period. Congress has increased the President's authority to deplete DoD equipment stocks in FY 1982 from $50 million to $75 million.

U.S. WEAPONS EXPORTS FY 1981

Military Cash Sales

Saudi Arabia	$2,149 million
Japan	567
Australia	462
South Korea	377
Jordan	358
Netherlands	351
Britain	339
Switzerland	320
Egypt	318
West Germany	247
61 other countries	2,118
TOTAL	$7,606 million

Military Aid

Turkey	$284 million
Egypt	233
Israel	137
Greece	80
Portugal	53
Sudan	43
El Salvador	29
Netherlands	27
Philippines	26
Lebanon	22
59 other countries	184
TOTAL	$1,118 million

Note: Cash sales totals represent FMS cash sales only and do not include $2.1 Billion in FY 1981 private commercial sales. Aid totals include grants under the MAP and IMET programs and loans under the FMS-Financing program.

Source: DoD.

Chart prepared by the Center for Defense Information.

MILITARY VS. ECONOMIC AID

"The shift in emphasis toward security-related assistance reflects an ideological turn of the Reagan Administration toward greater use of military instruments of foreign policy about which honest men can differ. I happen to believe that such a turn can be easily overdone and [illegible] it risks undermining [illegible] security, self-reliance [illegible] economic viability of countries receiving our security assistance. Moreover, it carries the risk of committing the United States to growing financial support for programs that are incompatible with a long-run anti-inflation program at home and therefore unlikely to evoke essential continuing public support."

Harry Shaw
Former Chief of Military Assistance Branch, Office of Management and Budget
March 1981

Warehouse for Weapons

The most controversial aspect of the Reagan Administration's military aid program is the creation of the Special Defense Acquisition Fund (SDAF). This is to be a revolving fund, financed by money from previous weapons purchases of foreign governments. Congress has established a $300 million limit on the fund for FY 1982 and $600 million for FY 1983.

This money will be available to the President for procurement of military equipment to be held in readiness for transfer to other nations, presumably in times of crisis. In essence, it is the creation of a stockpile of weapons most likely to be requested by other governments in the future so that the weapons can be rushed to any hot spot in the world without delay.

The Administration may find it increasingly difficult to justify the diversion of funds and weapons for a stockpile for other nations in an era of stringent domestic budget cuts and in light of the need to improve the readiness of U.S. armed forces at the present time.

The SDAF is likely to spur increased arms exports and create demands for the stockpiled weapons by other countries. The U.S. Government will be ordering military weapons on its own and in advance in anticipation of possible orders from foreign nations. The very existence of the stockpiled weapons will make rationalization of future sales easier because the weapons will be immediately available and in stock.

The FY 1983 Aid Proposal: A 44% Increase

When Congress passed the foreign aid bill in December 1981, it authorized funding levels for FY 1983 as well as FY 1982. In early March 1982, the Reagan Administration submitted to Congress a new proposal for boosting the FY 1983 military aid level to $6.5 Billion, which is $1.5 Billion (30%) above the level Congress authorized just three months earlier and $2 Billion (44%) above the FY 1982 level.

The top seven recipients under President Reagan's FY 1983 military aid proposal would be:

- Israel, $1.7 Billion
- Egypt, $1.3 Billion
- Turkey, $469 million
- Spain, $404 million
- Greece, $283 million
- Pakistan, $276 million
- South Korea, $212 million

The nations of Southwest Asia would benefit the most from the new proposal. They would receive 75% of the U.S. military aid funds, compared to 14% for Europe, 7% for East Asia, 2% for Latin America and 1% for Africa.

Notable elements of the new proposal include:

- $3.9 Billion in U.S. Government-guaranteed military loans to 31 nations and a Caribbean regional program. The major recipients would be Israel, $1.2 Billion; Egypt, $900 million; and Spain, $400 million.
- waiver of payment on $950 million in foreign military sales loans: $500 million for Israel, $400 million for Egypt and $50 million for Sudan.
- $789 million in new very low interest military loans for 17 nations and a Caribbean regional program. The major recipients would be Turkey, $300 million; Portugal, $75 million; Tunisia, $70 million; and El Salvador, Morocco, Sudan and Thailand, $50 million each.
- a new $5 million "anti-terrorism assistance" fund for training and assisting foreign law enforcement authorities in combatting international terrorism.

In contrast to the 44% increase proposed for military aid in FY 1983, the Reagan Administration has asked for only an 8% increase in economic assistance to foreign countries.

Negative Economic Aspects

While the economic benefits of increasing U.S. arms sales are trumpeted loudly and often, there are also negative economic aspects to an aggressive arms transfer policy.

Too often political and military rationales are put forth for foreign military sales and aid requests without adequate attention to economic concerns. Frequently, internal economic problems are far more serious for the recipient than any threat from an external power. Economic conditions underlie nearly all Third World problems and U.S. arms sales often directly exacerbate those problems.

Reagan's promotion of arms sales encourages developing nations to use up their scarce resources on armaments. Funds devoted to weapons absorb economic resources and consume a large portion of the scarce foreign exchange of poor nations, thereby slowing or undermining development programs.

Even in the case of grant American military aid, or concessional loans, there is the danger of the U.S. creating a group of client states permanently on the dole and unable to function as independent nations. In the long run, this is undesirable for the recipient and the United States.

IGNORING ROOT PROBLEMS

"We need, as a country and as a government, to begin to recognize that national security of countries in the Third World is far more threatened by the economic and social difficulties these countries confront than it is by the prospect of external aggression."

Congressman
Howard Wolpe (D-Mich)
December 1981

"We can best promote world stability by aiding economic development, and thus hitting at the roots of unrest in the poor nations, rather than shipping instability around the world in the form of weapons for shaky governments."

Congressman Toby Moffett
(D-Conn)
December 1981

U.S. Arms to 127 Nations

The United States Government provided arms to 86 nations in FY 1980 and private U.S. defense manufacturers sold weapons to 127 nations. In FY 1981, the U.S. Government provided arms to 96 of the world's 161 nations. (The private commercial figures for FY 1981 are not yet available). These sales ranged from hundreds of dollars for pistols and ammunition to Billions of dollars for America's latest and best planes, tanks, ships and missiles.

American weapons are sent to every continent of the globe, except Antarctica where an international treaty prohibits it. Some of the governments to which the U.S. provided military equipment and services in 1980 are surprising: Afghanistan, China, Finland, India, Iraq, Libya, Romania, Syria and Yugoslavia. Others many have never heard of: Brunei, Fiji, Nauru, Qatar, Burundi, and Upper Volta.

The leading cash sale customers for U.S. arms over the past decade were Saudi Arabia with $34 Billion worth of purchases and Iran with $14 Billion. Those two Middle East nations were followed by three European countries: Britain, $5 Billion; West Germany, $4.6 Billion; and the Netherlands, $2.8 Billion.

The leading recipients of U.S. military aid from 1971 to 1980 were: Israel, $11.6 Billion; South Vietnam, $8.7 Billion (all prior to 1976); South Korea, $2.9 Billion; Egypt, $1.5 Billion (all since 1976); and Turkey, $1.3 Billion. Other major aid recipients included: Greece, $1.1 Billion; Cambodia, $1.1 Billion; Jordan, $900 million; Laos, $800 million; and Spain, $600 million.

American military sales and aid have been increasingly concentrated in the Middle East/Persian Gulf region. From 1950 to 1970, the U.S. sent half of its military exports to Europe and Canada, one-third to East Asia, and less than ten percent to the Middle East. Since 1973, 65% of U.S. foreign military cash sales and 51% of U.S. military aid have gone to the Middle East area. In 1981, 40% of U.S. weapons exports went to the Middle East, 30% to Europe and Canada, 23% to East Asia, 3% to Latin America, and 2% to Africa.

The concentration of U.S. weapons exports in the Middle East area is very troubling. Soviet arms transfers are similarly concentrated in the region. It is the most unstable and volatile region in the world, in large part because of the superpowers' pouring of weapons into it. In the Middle East, passions run high; alliances change often and unexpectedly; internal instabilities are the norm, not the exception; military solutions to problems are sought.

The United States should slow all major new weapons sales to the Middle East countries. With over $35 Billion worth of weapons still in the pipeline to Middle East nations, there is no need to rush into new orders. Massive U.S. and Soviet arms transfers contribute significantly to the growing danger of major conflicts there.

Supporting Repressive Regimes

During the Cold War of the 1950's and 1960's, the United States supported any regime, particularly in Latin America, which was demonstrably anti-communist. In the late 1970's, President Carter cut off or severely reduced U.S. military aid and sales to Argentina, Brazil, Chile, Guatemala, El Salvador, Pakistan, Paraguay and Uruguay, among others, because of their poor human rights records.

Since President Reagan has been in office, the restrictions against military aid to Argentina, Chile and Pakistan have been eliminated and military assistance to El Salvador and Guatemala has been expanded.

Of the 41 military-dominated governments in the world with records of violating citizens' rights (e.g., arbitrary arrest, torture, summary execution), the United States has been a major supplier of arms to 28. In the past two decades, the United States has exported nearly $27 Billion of weapons to those 28 nations and over the past 30 years has trained 347,000 military personnel from those countries.

The U.S. is required by law (Section 502B of the Foreign Assistance Act) to cut off military aid to consistent and gross violators of internationally recognized human rights standards. The Reagan Administration appears to be violating the spirit if not the letter of the law.

U.S. ARMS TO REPRESSIVE REGIMES IN 1980: OVER $1.2 BILLION

1.	Afghanistan	$ 281,000
2.	Argentina	7,323,000
3.	Bangladesh	668,000
4.	Bolivia	529,000
5.	Brazil	10,802,000
6.	Cameroon	129,000
7.	China	622,000
8.	El Salvador	2,979,000
9.	Guatemala	428,000
10.	Haiti	336,000
11.	Honduras	6,163,000
12.	Indonesia	21,906,000
13.	Iraq	1,000
14.	Liberia	574,000
15.	Libya	221,000
16.	Mali	121,000
17.	Mauritius	10,000
18.	Nicaragua	1,000
19.	North Yemen	2,026,000
20.	Pakistan	34,052,000
21.	Paraguay	750,000
22.	Philippines	45,075,000
23.	South Korea	422,826,000
24.	Sudan	412,000
25.	Syria	1,000
26.	Taiwan	584,586,000
27.	Togo	30,000
28.	Turkey	77,924,000
29.	Upper Volta	96,000
30.	Uruguay	1,262,000
31.	Zaire	11,136,000
TOTAL		$1,233,269,000

NOTE: Since 1980, the U.S. has stopped military sales and aid to some of these governments, such as Afghanistan, and initiated sales and aid to other repressive ragimes, such as Somalia.

Values are then-year dollars and include FMS agreements, commercial sales and grants under the MAP and IMET Programs.

Sources: Department of Defense and Ruth Sivard.

Chart prepared by the Center for Defense Information.

WHO'S ARMING THE THIRD WORLD?
U.S. AND ALLIES STILL #1

Year	U.S.	All Non-Communist Nations	All Communist Nations	U.S.S.R.
1973	42%	65%	35%	32%
1974	47%	68%	32%	28%
1975	51%	80%	20%	17%
1976	46%	64%	36%	30%
1977	35%	63%	37%	34%
1978	41%	85%	15%	11%
1979	35%	65%	35%	30%
1980	23%	61%	39%	36%

Note: Figures are percentages of worldwide arms agreements with Third World countries.

Sources: CRS, U.S. Gov't.

Chart prepared by the Center for Defense Information.

Arms sales and aid are undeniably symbols of political support for the government to which they are sold or given. Moreover, the U.S. exports arms, mainly through the commercial channel, which can be used for internal repression, such as small arms, riot control gear, protective personnel equipment, jeeps, trucks and armored cars.

The United States is lending political and military support to some of the most repressive regimes in the world. The U.S. is alienating the people of those nations, assuring that if and when the government in power falls the U.S. will be viewed with hostility. Iran and Nicaragua are just the latest examples.

Arms Do Not Mean Influence

Arms transfers have become the lynchpin of U.S. relations with many, if not most nations of the world.

Yet, overwhelming historical evidence indicates that arms transfers are not a highly successful method of gaining influence and winning friends around the world. Arms transfers by no means insure the good will and cooperation of the recipient nation, nor any U.S. control over use of the weapons.

Both the American and the Soviet records at influence-gaining through arms transfers are very bad. The U.S. poured more military equipment into South Vietnam and Iran than almost any other nations, with disastrous results in both cases.

Saudi Arabia has demonstrated its gratitude over the AWACS sale by raising oil prices the day after Congress approved the sale, by condemning Oman for permitting U.S. military equipment to be based there, by resuming relations with Libya and by cancelling a visit to the U.S. by Crown Prince Fahd.

The Soviet record is even worse. Nearly all major Soviet arms clients since World War II, outside of those in Eastern Europe, have turned against the U.S.S.R.: China, Indonesia, Egypt, Sudan and Somalia. In recent years, two other major Soviet arms recipients—Iraq and India—have moved away from the Soviet Union and have diversified their weapons supply.

The leverage that might come with the ability to deny new arms deals or to cut off spare parts, training and replacement weapons is seldom exercised. It seems that the recipient has more leverage because of the availability of alternative sources and by virtue of being able to raise doubts about U.S. or Soviet reliability as an arms supplier and ally. The good will generated by an arms sale, if any, may only last until the next request for weapons comes along.

U.S. Still Number One

The Reagan Administration has hinged its aggressive arms transfer policy on the allegation that in recent years the Soviet Union has signed more arms agreements and made more deliveries to the Third World—the battleground for superpower influence—than has the United States. America's longstanding distinction of being the world's number one arms supplier is endangered, according to Administration officials.

Secretary Buckley told the Senate Foreign Relations Committee in July 1981 that, "Over the past four years, Soviet arms transfers of some of the most sophisticated weapons have surpassed those of the West by an impressive margin. This is a fact of absolute importance for the Congress to understand if it is to place the Reagan arms transfer policy in proper perspective."

Putting aside the questions of whether the United States has benefited from its dominant position in the past and whether being number one is militarily, politically or morally desirable, let us examine the facts. Unfortunately, data on Soviet arms transfers are hard to come by and, because of difficulties with making dollar-cost evaluations of Soviet goods, are not always reliable.

According to figures provided by the Congressional Research Service (CRS) and based on official U.S. Government sources, Soviet arms agreements to the Third World *have* risen sharply the last two years. After a record arms *sales agreement* level in 1977 of $9.6 Billion, the total dropped drastically to $2.9 Billion in 1978, rebounded to $8.8 Billion in 1979, then jumped to a new record level of $14.9 Billion in 1980. Soviet *arms deliveries* rose steadily from $2.4 Billion in 1975 to $9.1 Billion in 1979, then fell to $6.7 Billion in 1980.

According to the CRS data, the first year that Soviet arms agreements with the Third World surpassed U.S. agreements was in 1980; Soviet arms deliveries surpassed those of the U.S. for the first time in 1979. *If one takes a longer view*

MAJOR WEAPONS EXPORTED TO THE 3RD WORLD 1973-80

Supplier	Tanks/ Self-Propelled Guns	Artillery	Armored Personnel Carriers	Combat Ships	Submarines	Combat Aircraft	Other Aircraft	Helicopters	SAMs
U.S.	6,820	6,700	13,280	276	19	2,200	1,450	1,340	6,190
W. Europe	1,960	1,910	3,820	305	19	640	1,010	1,600	2,270
Sub-Total	8,780	8,610	17,100	581	38	2,840	2,460	2,940	8,460
USSR	11,130	13,170	12,020	192	10	3,540	390	1,010	21,640
TOTAL	19,910	21,780	29,120	773	48	6,380	2,850	3,950	30,100

Note: East European nations also export weapons, though not in large quantities. Over the past 25 years, the non-Soviet Warsaw Pact members have exported only $4.5 Billion of arms to the Third World.

Sources: CRS, U.S. Gov't.

Chart prepared by the Center for Defense Information.

than one or two years, the supposed Soviet "advantage" disappears. The CRS data show that over the past five years (1976-80), the U.S. has signed $49.7 Billion of arms agreements with the Third World as compared to $42.8 Billion for the Soviets. Since 1973, when world arms trade exploded, the figures are $75.2 Billion for the U.S. and $55.7 Billion for the U.S.S.R. The latest data available from the U.S. Arms Control and Disarmament Agency (ACDA) shows that U.S. arms deliveries to the Third World for the period 1974-78 exceeded those of the Soviet Union $22.4 Billion to $20.8 Billion. With U.S. arms exports headed for record levels in 1982, it appears the Reagan Administration is voicing so much concern over what is likely to be a one or two year phenomenon.

The Administration is using figures which are hard to track. Secretary Buckley testified before Congress that from 1977 to 1980 Soviet arms deliveries to the Third World exceeded those of the United States by 20%. The CRS figures show that Soviet deliveries exceeded those of the U.S. by only 14% ($26.9 Billion vs. $23.6 Billion) and that U.S. arms agreements with the Third World during that period actually surpassed those of the U.S.S.R., $39.9 Billion to $36.2 Billion.

The Administration has also stated that in 1980 Soviet arms agreements with the Third World were nearly double the value of U.S. sales. CRS data show $14.9 Billion for the Soviets and $9.7 Billion for the U.S. Such discrepancies cast doubt on all Administration claims about Soviet arms transfers, including the claim that Soviet arms deliveries to Cuba are at the highest level since 1962.

The Administration's claims are misleading because they only compare U.S. and Soviet totals and they only look at transfers to the Third World, not worldwide totals.

Many of the United States' closest allies are major suppliers of arms to other nations. France is the world's number three supplier, Britain is number four, and Germany and Italy export large quantities of weapons each year.

According to the CRS, in 1980 all non-communist nations' arms *agreements* with the Third World totaled $25 Billion, versus $15 Billion for the Soviet Union and $1 Billion for all other communist nations, including Soviet enemy China. Non-communist countries' arms *deliveries* to the Third World in 1980 totaled $10.7 Billion compared to $6.7 Billion for the U.S.S.R. and $1 Billion for all other communist countries, including China.

The U.S. is still the number one arms supplier worldwide. The "Third World" excludes the Warsaw Pact, NATO, Europe, Japan, Australia and New Zealand. Soviet transfers to the Warsaw Pact average about $1.5 Billion per year (exact figures for 1980 are not available), while U.S. arms agreements with developed nations totaled over $6 Billion in 1930.

The Military Dangers

U.S. arms transfers often are defended on the basis that they "promote regional stability," but they may lead to instability, greater belligerence within the region on the part of the recipient and greater hostility and competition between the U.S. and U.S.S.R., thus increasing rather than lessening military problems for the U.S.

Massive weapons exports tend to spur regional arms races and increase tensions between unfriendly neighbors, thereby endangering the chance for peaceful resolution of problems. Nowhere is this more clear than in the Middle East, where the U.S. pours arms into Israel, Saudi Arabia, Egypt, Sudan and Jordan while the Soviet Union arms Syria, Iraq, South Yemen, Libya and most recently, Jordan.

Arms transfers lead to an increase in the destructive capabilities of the recipient and in the level of violence in the area. In the case of the sale of America's latest and best weapons, such as AWACS and F-15s to Saudi Arabia or F-15s and F-16s to Israel, the increase is dramatic. Any conflict in the future is likely to be much more destructive, with more casualties and more damage to the civilian population and property. In some situations, such as Israel and Saudi Arabia or Greece and Turkey, the United States is arming both sides of potential conflicts.

The United States has very little control over how its weapons are used. Despite stipulations in U.S. law and in all U.S. arms transfer agreements that U.S. weapons are to be used for defensive purposes only, that is not always the case. American weapons have been used to launch an attack on neighbors (e.g., Indonesia against East Timor, Morocco against the Polisario in the Western Sahara, Israel against Iraq), and to suppress internal dissent (e.g., Iran under the Shah, El Salvador today).

A POOR SUBSTITUTE

"The foreign policy of the United States under the Reagan administration more than any administration in American history, is based on a single strategic factor—arms sales. We now sell arms to anyone, anywhere, for any reason. Arms sales have become a substitute for diplomatic effort, for arms control, and for economic development."

Senator William Proxmire
(D-Wisc)
November 1981

"What I think that the administration is going to have to realize is that we cannot solve foreign policy problems in the Middle East, in the Far East, Africa or Latin America by mere arms sales. So far that's about the only element of a foreign policy that we've seen, arms sales. You cannot continue to mount one potential ally with some arms, and then balance that off with arms to the other side."

Senator Gary Hart
(D-Colo)
July 1981

Foreign weapons do not prevent wars. At best, they may delay war or create a temporary stand-off. In the process, they make political accommodation more difficult. U.S. arms sales do not induce nations to seek political or economic solutions to their problems. More often, they lead to greater intransigence on the part of the recipient and encourage delay or outright refusal to attempt political and economic solutions. The recipient comes to believe that if only it can get more and better U.S. weapons, all its problems can be solved. U.S. arms permit incumbent foreign regimes to perpetuate their rule without resolving chronic, underlying non-military problems.

Iran has made everyone aware of the danger of providing sophisticated weaponry to foreign countries with serious internal problems. With a sudden change of government, or in the policies of a foreign government, the United States may be in the position of having armed an adversary, or of having compromised secret U.S. military technology. With the fall of the Shah, the U.S. lost technological secrets in the F-14 aircraft and Phoenix missiles.

There have been numerous instances when strong opposition by U.S. military officials to foreign sales on the grounds of fear of loss of critical technology has been overridden for political or economic reasons.

Reagan's expansion of U.S. weapons exports overseas will increase competition with the Soviet Union and create another type of resource draining arms race. Arms sales to foreign nations should not be viewed as a quick fix for perceived American military weakness. Arms transfers to other nations do not deter the Soviet Union. Increased U.S. arms transfers will lead to increased Soviet arms transfers and enhance the likelihood of a regional conflict which could escalate into a superpower confrontation.

Instead of reducing the chance of direct U.S. involvement in overseas conflicts, huge arms exports tend to increase U.S. exposure. The United States is now selling advanced weapons that often require a large contingent of U.S. military and civilian technicians to train indigenous personnel and to help maintain and operate the weapons system. These technicians become so active in the day-to-day operation of the foreign military establishment that the danger of their becoming involved in any attack on the host nation, whether the U.S. desires to be involved or not, is great.

Massive overseas arms exports may lead to a depletion of our own armed forces' inventories, or at least slow down the buildup of U.S. stocks. If the United States is as understrength as Reagan claims, and in such need of rapid expansion of conventional forces, why sell abroad at all? Some weapons are sold and delivered before they are fully operational with the U.S. services.

An Overburdened System

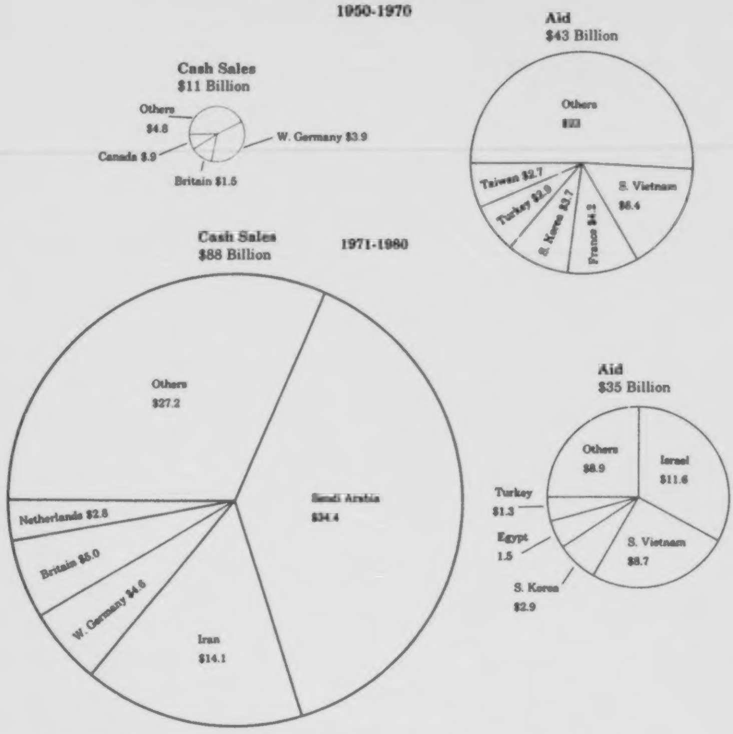
The State Department gets about 22,000 requests for arms exports annually. In June 1979, the Defense Security Assistance Agency was managing 15,500 Foreign Military Sales cases worth $72.5 Billion. In April 1981, it was managing 16,891 cases worth $96.3 Billion. Given these staggering numbers, it is not surprising that the Pentagon has severe management problems with its Foreign Military Sales program.

The General Accounting Office (GAO) in particular has repeatedly criticized the Pentagon for financial mismanagement and for accounting and cost recovery problems in the FMS program. The GAO has charged the Pentagon with failure to bill fully or in a timely fashion, for improper computation of termination costs in trust funds, for underpricing military goods and services, for untimely and inaccurate delivery reporting, and for not recovering all costs to the U.S. from transportation, training and research and development activities, among other things.

Through the omission of significant costs and the failure to collect full charges for foreign sales, the U.S. Department of Defense is in effect subsidizing foreign sales with funds from the U.S. military budget. At least hundreds of millions of dollars are involved, maybe. Billions. The GAO claims that the Pentagon had $1 Billion in underbillings between 1976 and 1981. As of March 1981, the Navy alone had $600 million in unprocessed bills; some of the equipment had been delivered more than one year before. It is doubtful if all of the weapons sold to foreign governments are paid for.

President Reagan has proposed the expansion of U.S. military sales overseas at the very time that the system is on the brink of being out of control. The U.S. cannot properly handle all of the foreign military sales cases already on hand. Half of the weapons provided under arms agreements signed over the past 30 years are still undelivered. The U.S. is not helping itself or other nations by placing more burden on an inefficient, wasteful system.

U.S. WEAPONS EXPORTS:
1950-1970: $54 Billion, 1971-1980: $123 Billion



Note: Then-year dollars. Cash sales include FMS agreements and commercial sales. Aid includes MAP and IMET grants and FMS-Financing program loans.
Source: DoD
Chart prepared by the Center for Defense Information.

Conclusions

- The Reagan Administration's aggressive promotion of U.S. arms sales and military aid abroad will not benefit the United States militarily or politically in the long-run.
- The Reagan Administration's arms transfer policy will increase competition with the U.S.S.R., will spur regional arms races, will make future conflicts more likely and more destructive, and will increase the chance of U.S. involvement in a foreign conflict at a time and place not of our own choosing.
- In a time of severe cuts in American domestic programs, it is unreasonable to expect U.S. taxpayers to subsidize the military purchases of foreign governments. U.S. military grants and loans, which are increasing under Reagan, should be cut back and extended only in exceptional circumstances.
- The U.S. should revive the Conventional Arms Transfer talks and take a leadership role in convincing the Soviet Union and European nations that reductions in international arms traffic are in every nation's interest.
- The U.S. should not sell a weapons system abroad to a non-Treaty ally until it is fully operational with American forces. The United States should institute a ban on the export of the United States' newest, most modern weapons to all Third World countries.
- The U.S. should slow all major new weapons sales to the Middle East. With over $35 Billion worth of weapons still in the pipeline to that region, there is no need to rush into new orders. The concentration of U.S. and Soviet arms transfers in the region contributes to the growing danger of major conflicts there.

Andrew J. Pierre

ARMS SALES: THE NEW DIPLOMACY

The recent heated debate over the sale of Airborne Warning and Control System (AWACS) planes and F-15 fighter components to Saudi Arabia was only one of a number of controversies involving U.S. arms sales. The next weapons transfer which will meet congressional resistance is that of F-16 fighters to Pakistan, a sale which some believe will give a renewed impetus to the arms race on the subcontinent and undermine nonproliferation efforts. Serious questions are also being raised about the wisdom of the planned sale of F-16s to Venezuela, thereby crossing a technological threshold which in the past has restrained the transfer of the most advanced fighter aircraft to Latin America. Proposed new arms supply relationships with Argentina, Chile and Guatemala will draw the ire of those who are concerned about the dropping of past restrictions based upon these countries' human rights records. The Reagan Administration is faced with a tough decision regarding the sale of the FX fighter to Taiwan. Beijing has put Washington on notice that it considers the proposed sale as a "litmus test" of future Sino-American relations. But the same type of symbolism is attached to the sale by Taipei, which would view the failure to sell as a sign of abandonment.

Nor is it only the United States that is bedeviled by controversial arms sales decisions. Chancellor Helmut Schmidt of West Germany was forced to draw back from the sale of Leopard II tanks to Saudi Arabia earlier this year because of strong objections within his Social Democratic Party. French President François Mitterrand's decision to honor past commitments to Libya has raised objections. And even in Austria, a minor supplier of weapons, a sharp domestic debate has been unleashed by the sale of 57 light tanks to Argentina.

Arms sales have become, more than ever before, a crucial dimension of world politics. They are now major strands in the warp and woof of international affairs. Arms sales are far more than an economic occurrence, a military relationship, or an arms

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control challenge—*arms sales are foreign policy writ large.*

II

A number of trends combine to give arms sales greater saliency. The first is the sheer increase in the quantity of weapons being supplied. Arms transfers worldwide have more than doubled in the past decade, from $9.4 billion in 1969 to over $20 billion in 1980 (in constant 1977 dollars). The United States has been the largest supplier during this period and has seen its foreign military *sales* (as distinct from arms *delivered*, and measured so as to include items such as training and logistical assistance) rise from $1.1 billion in 1970 to approximately $16 billion today (in current dollars).[1] The Soviet Union has also sharply increased its arms transfers and by some measurements has begun to overtake the United States. The level of French and British arms sales has quadrupled since 1970 and a number of smaller suppliers have significantly increased their sales.

A second trend is the qualitative upgrading of arms sales. Prior to the 1970s, most arms supplied (especially to the developing countries) were the surplus and obsolete weapons of the major powers, which they wanted to eliminate from their inventories (often as military assistance grants) so as to make room for new, more advanced equipment. Even in the early 1960s the aircraft transferred to the developing world more often than not were ten-year-old American F-86 and Soviet MiG-17 fighters rather than the first-line planes of the period such as F-4s and MiG-21s. In contrast, today some of the arms being transferred, such as F-15s, MiG-23s and AWACS, are among the most sophisticated in the inventories of the supplier states.

A noteworthy aspect of the qualitative improvement has been the spread of sophisticated weaponry through co-production agreements. These enable countries to acquire through licensing arrangements the knowledge to manufacture or to assemble a weapons system. More than two dozen developing countries now participate in such arrangements with outside suppliers.

A third trend is in the changed direction of the arms flows.

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[1] This does not include the recent $8.5 billion sale to Saudi Arabia. Most of the arms sales data in this article are drawn from U.S. Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers*; U.S. Department of Defense, *Foreign Military Sales and Military Assistance Facts*; Central Intelligence Agency, *Communist Aid to Less Developed Countries of the Free World*; International Institute for Strategic Studies, *The Military Balance*; and Stockholm International Peace Research Institute, *Yearbook of World Armaments and Disarmament*. Each of these is published annually. Due to variations in methodology, however, comparisons among these are difficult and may be misleading.

Until the mid-1960s most weapons went to developed countries, usually the NATO allies of the United States or the Warsaw Pact allies of the Soviet Union. It was not until the war in Southeast Asia in the second half of the decade that the dominant portion went to the developing world. Nor was the trend reversed at the end of the Vietnam War. During the late 1970s the Persian Gulf and Middle East countries received by far the largest portion of arms, with a fourfold rise in the value of arms imports (in constant dollars) during the decade. Iran, Saudi Arabia and Israel were the major recipients of Western arms, while most Soviet weapons were shipped to Syria, Iraq, Libya, and, a little earlier, Egypt. Indeed, by 1980 this region was receiving 50 percent of all weapons shipped to the Third World. This has led some observers to conclude that the arms sales "problem" is solely a Middle East problem—but this is far too simplistic an analysis. Arms sales to Africa increased 20-fold from 1969 to 1978 and to Latin America tripled (again, in constant dollars). Although the totality of these sales was small compared to the Middle East figure, these increases were important in the context of the respective regions. Over three-quarters of the global arms trade now goes to the Third World.

A fourth trend is the establishment of indigenous armament industries within the Third World. Twenty-four developing countries now produce weapons of some type. This, too, is a recent change; two decades ago hardly any of these nations manufactured arms locally. The prime incentives for the creation of these national industries have been political or security concerns rather than commercial ones, as sometimes averred. Nations have been motivated by the desire to reduce their dependence upon outside suppliers in order to bolster their national security. But once the industry is created, exports are seen as a way of reducing unit costs, offsetting research and development expenses, and providing trade benefits. Among the states which have sought to augment their self-sufficiency because of the perceived unreliability of outside suppliers have been Israel, South Africa, Taiwan, South Korea and India. Others have been motivated less by perceptions of a threat to their security than by broad political considerations relating to their status within their region: Argentina, Brazil, Venezuela and Indonesia.

While arms production in the Third World is certain to continue expanding at a steady rate, its impact upon the global arms trade is likely to remain marginal. Four states accounted for 87.5 percent of the value of major weapons transferred to the developing world during the decade of the 1970s: the United States (45 percent), the Soviet Union (27.5 percent), France (10 percent) and Britain (5 percent). When West Germany, Canada, Italy, the Netherlands, and Czechoslovakia are added in, the figure goes up to 94.3 percent. The new Third World suppliers are mainly producing second-echelon weapons and do not have the technological base to compete with the principal suppliers. No Third World country has yet become the principal supplier of a developing country.

III

These trends in the transfer of arms must be viewed as an integral part of the broader transformations in the international system. As is well recognized, the world is undergoing a diffusion of power, political and economic, from the industrialized states to the developing nations. There is an important military component to that diffusion as well. The acquisition of conventional arms, often sophisticated and in far larger quantities than the recipient states have previously possessed, is a critical element of that diffusion. Arms are a major contributing factor to the emergence of regional powers such as Israel, Brazil and South Africa; their purchase can make a deep impact upon regional balances and local stability.

Arms sales, moreover, have become a key instrument of diplomacy for the weapons suppliers, in some cases the best one available to them. There has been a decline in the traditional instruments of reassurance and diplomacy, such as formal alliances, the stationing of forces abroad, and the threat of direct intervention. At a time when the major powers are less likely to intervene with their own armed forces, they are more prone to shore up friendly states through the provision of arms or to play out their own competition through the arming of their proxies. A contributing factor has been the reduction of other instruments of diplomacy, such as developmental aid. Both the United States and the Soviet Union now give less in economic than in military assistance. Even ideology ("Free World" versus Communism) no longer has the cementing influence that it once had.

Arms sales must also be seen in the context of North-South issues. They constitute a redistribution of power whose significance in certain cases may be equal to or greater than that of some of the better-recognized economic forms. Certainly the withholding or granting of arms can have a great political and psychological impact upon Third World leaders. Then, too, arms sales can be a method of technology transfer; an increasing number of states do not want the weapons fresh out of the crates but rather the technology that will enable them to build, or co-produce, at home.

Finally, arms sales have become, and surely will remain, a crucial aspect of the continuing East-West competition in the Third World. Indeed, they are now the prime instrument used by the Soviet Union, and an important one for the United States, in the rivalry for the allegiance of much of the world. The capability of the Soviet Union to project its military presence to distant places expanded greatly during the 1970s, and Moscow shows no reluctance to use arms transfers to support its political aims. The energy vulnerability of the West has made the security of the Persian Gulf and the stability of the Middle East matters of the highest importance; arms sales have become an important means used by the West to safeguard these interests, quite apart from the economic benefits to be gained from sales to the oil-rich countries.

IV

The greater prominence of arms sales today has not been matched by new insights as to their utility. Judgments about arms sales are often extremely difficult to reach, as the recent debate on the AWACS sale demonstrated. This is due, in part, to the lack of norms about the requirements of international security. In dealing with the spread of nuclear weapons, most observers agree about the goal of preventing nuclear proliferation, and the disagreements, important as they are, are about tactics for achieving this. No similar principle is applicable to the spread of conventional arms.

A particular sale may be destabilizing or it may restore a balance. It may promote an arms race in a region, or it may help deter a potential conflict. Moreover, what is true in the short run may not be valid for the longer term. Who is to say how a weapon transferred now could be employed in ten years' time (e.g., U.S. weapons given to South Vietnam)? And who can vouchsafe that the future political leadership of a country will be as "responsible" about the use of weapons in the future as it is at present (e.g., the Shah)? Or that the alliances and foreign policy alignments of today—upon which the prospective supplier must base his decision—will be the same tomorrow (e.g., Somalia and Ethiopia)?

Arms sales decisions are thus fraught with policy dilemmas. Even when a supplier country has adopted general policy guidelines, each weapons transfer decision must be made individually, and often it will involve complex judgments and trade-offs. Short-term benefits should be weighed against longer term risks. Economic advantages may have to be balanced against potential political disadvantages. One important foreign policy goal, such as strengthening an alliance relationship or a nation's capacity for self-defense, may run counter to another goal, such as promoting human rights (e.g., South Korea). Assisting one nation (e.g., China) could cause a deterioration of relations with another (e.g., the Soviet Union). Or, yet again, such indirect pressure may moderate the other's behavior. Providing substantial amounts of conventional arms may or may not reduce incentives for the acquisition of nuclear weapons (e.g., Pakistan). As the debates in recent years on a large number of arms sales show, one can almost take for granted that every decision will involve competing objectives.

V

Let us now look at the arms sales policies and practices of the Soviet Union, France (the largest West European supplier) and the United States before turning to the vexing question of how to develop some type of international restraints. As it happens, the American share of the world arms market is decreasing, while the Soviet and West European portions continue to grow.

For the *Soviet Union* arms have long been the primary instrument for dealing with the Third World, essentially because of the paucity of alternatives. The Soviet economic and political model has few attractions for the developing nations; Moscow has comparatively little to offer in the way of trade, investment, and the transfer of technology; its development assistance has been kept low; and the Soviet Union's ideology and culture only appeals to a very limited group of countries. Weapons, on the other hand, can be provided cheaply and abundantly.

Long the second largest supplier of arms, the Soviet Union's transfers have begun to rival those of the United States. Between 1977 and 1980 the Soviet Union sent to the Third World 5,750 tanks and self-propelled guns in comparison with America's 3,030; 11,400 surface-to-air missiles in comparison with 4,960; and 1,780 supersonic combat aircraft in comparison with America's 510. Total arms deliveries have risen sharply in recent years and it is not impossible that Moscow will achieve the dubious distinction of becoming "Number One" during the 1980s.

Along with Soviet arms come a disproportionately large number of advisers and technicians, raising suspicions that many are sent for intelligence-gathering purposes. The Central Intelligence

Agency estimates that 15,865 military advisers from the U.S.S.R. and East European countries were stationed in the Third World in 1979, ostensibly to assemble and maintain Soviet arms as well as to train the forces of the host country in their operation. They were to be found in large numbers in Syria (2,480), Libya (1,820), Iraq (1,065), Ethiopia (1,250) and Angola (1,400). Large quantities of surplus weapons are available for quick delivery. The Soviet military industry routinely overproduces with potential exports in mind; these provide a greater reservoir of arms than is available in the West and make it less likely that the equipment of its own armed forces will be drawn upon.

Moreover, during the past decade the Soviet Union greatly improved its capacity to transport weapons over great distances, by developing the IL-76 long-range cargo aircraft and by expanding its maritime fleet with roll-on, roll-off ships which do not require extensive port facilities. This new logistical capability was amply demonstrated by the impressive ferrying of arms and Cubans to Angola and Ethiopia. By Central Intelligence Agency estimates the average time lapse between sale and delivery of Soviet arms abroad, both old and new, is half that of the United States.

Moscow's arms sales have been carefully calibrated to serve its political purposes. Arms have been supplied to national liberation movements to demonstrate solidarity and foster ideological affinity, as well as to Marxist regimes and to other countries whose favor the Soviets have wanted to court or whose political leanings they have wanted to influence. Arms have been supplied to Castro in exchange for his support for Soviet aims in Africa and Central America. Middle East countries received over half of the Soviet arms sent to the Third World in the past five years, and the U.S.S.R. became the largest supplier to sub-Saharan Africa.

For a long time arms were delivered either free or at low cost with very favorable conditions, including long-term credits of eight to 12 years, and minimal interest rates of 2.5 percent often repayable in soft, local currency which was then used for the purchase of goods from the weapons-receiving country. In recent years, however, arms sales have become an important earner of scarce hard currency, as weapons have been sold to oil-rich countries such as Iraq, Libya and Algeria, thereby greatly assisting Moscow's trade balance. Thus, lucrative arms sales to the Third World are now helping Moscow finance its purchases of Western technology and food. Nevertheless, the Soviet Union remains prepared to make an economically less attractive deal if it suits its political purposes. For example, the terms of the $1.6-billion sale to India in 1980 are extremely generous, providing for repayment over 17 years at only 2.5 percent interest.

For the Soviet Union the Third World is the main battleground in the ideological competition with the West. We can expect that it will continue to rely on arms sales, and quite possibly expand upon their use, to win friends and gain advantage: Soviet military assistance has long been applied opportunistically, taking advantage of instabilities created by regional conflict or international crisis.

Yet it is far from clear that the arms transfer instrument here will be any more successful in the future than it has been in the past. The record, in fact, is strewn more with failures than successes. Arms to Indonesia did not inhibit Sukarno from adopting a pro-Chinese foreign policy and after the abortive 1965 coup from ousting the Soviets from the country. Weapons for Peru have done nothing to enhance Moscow's position on the South American continent as a whole. The Congo, Ghana, Guinea and other parts of sub-Saharan Africa have witnessed a long string of Soviet failures to establish a permanent presence. The Russian navy was summarily forced out of Berbera, the Soviet Union's largest overseas naval base. Arms supplied to Syria and Iraq have not made them fully pliable to Moscow's political wishes. Damascus has refused to give the Soviets as many military facilities as it seeks, and Baghdad condemned the invasion of Afghanistan.

The most striking failure has been in Egypt, where the Soviets penetrated the Egyptian military as they did in no other country. Egypt's armed forces were reorganized in Soviet style, and at the peak there were 17,000 Russian military personnel in place, some actually manning air defense sites and flying on patrols. Yet this did not prevent Sadat—after, it should be noted, consistent disputes with the Soviets regarding the adequacy of their arms deliveries—from breaking ties with Moscow and sending the Soviets home. In sum, the Soviet experience confirms that the provision of arms often does not readily translate into lasting influence.

VI

France ranks as the third largest supplier of conventional arms to the Third World. Approximately 40 percent of its national arms production is now sold abroad. The growth in arms *sales* during the 1970s has been dramatic, from 6,341 million francs in

1970 to 25,200 million in 1980; during the same period arms *deliveries* increased fivefold. Indeed, the export of arms has grown twice as rapidly as the nation's total exports.

This is often attributed to a laissez-faire arms sales policy under which the French government has been willing to sell almost any weapon to anybody; and on occasion French ministers have spoken of a policy of selling weapons "without political conditions." Economic considerations play an important role in motivating arms sales. There are more than 300,000 persons employed in the arms industry, not to mention the spinoff effects through sub-contracting and the provision of services. If ever there was a nation with a strong military-industrial complex, it is France. The state is an aggressive purveyor of French arms abroad. Moreover, the arms-for-oil connection, although never officially acknowledged, is quite direct. More than 80 percent of the nation's oil imports come from the Middle East, with Saudi Arabia and Iraq as the largest suppliers. These are precisely the two countries with which Paris has signed the largest arms contracts since 1974.

But the fundamental impetus behind French arms sales has been at least as much political as economic. The nation's political leadership, across the party spectrum, remains strongly attached to a concept of national independence which in turn is based upon an autonomous defense policy. This is perceived as important not only for French security but for the projection of the nation's influence in Europe and the world. And a national armaments industry is viewed as an essential characteristic of an autonomous defense capacity. To the maximum extent feasible, it is argued, France must have the capability of equipping its own armed forces without depending upon an uncertain source of supply from abroad. In order to maintain this ability to arm itself, France must export weapons, as the demand at home is not enough to justify the arms industry in economic terms.

Such aims, however, may in time create their own problems. The arms industry as a whole has become dangerously overdependent upon exports. As much as 75 percent of the aeronautical industries' products are sold abroad; of the 338 Mirage fighters that were ordered in 1974–78, for example, 297 were for overseas buyers, and the proportions are roughly the same for many other weapons systems. Should the overseas markets become saturated, or the competition from the other suppliers increase, France's highly successful arms industry could suddenly go into a serious tailspin.

While in opposition, the Socialist Party was highly critical of

French arms sales practice, insisting that sales to "colonialist, racist, or fascist" regimes should be stopped. François Mitterrand proposed in 1978 a series of measures intended to create some parliamentary control over arms sales at home and encourage regional conferences of recipients and supplier nations in order to set regional ceilings on transfers. He also called for a reorientation of French arms sales from the developing countries to Western Europe.

Since his election such lofty goals have been abandoned; indeed one already heard less of them in recent years. One of the first decisions made was to honor all existing arms contracts. Within days of Mitterrand's election, before even the elections to the Assemblée Nationale, the new President sent his brother, retired Air Force General Jacques Mitterrand, now the head of Aérospatiale, to Saudi Arabia for the purpose of assuring King Khalid that arms contracts valued at over four billion dollars would not be touched.

But the Mitterrand government is likely to pay more attention than Giscard d'Estaing did to human rights considerations when making arms sales, having promised to "moralize" them. Clearly it will not sell anything of military application to South Africa—up to the mid-1970s a major recipient of French arms and a bête noire of the French Left. Sales to countries such as Chile and Argentina will be more carefully scrutinized, and for the moment there is a ban on any new sales to Libya because of its role in Chad. Elsewhere, however, sales will continue and in black Africa could well be increased. Ironically, the nationalization of that part of the arms industry which remains in private hands (Dassault, Thomson and Matra) could force the Socialist government to undertake an even greater role in its long-term support.

VII

It is in the *United States*, however, that the arms trade phenomenon has received the most attention. In the past decade the nation's policy and practice on weapons sales has become a domestic political and foreign policy issue; Congress has imposed legislative controls, most notably through the International Security Assistance and Arms Export Control Act of 1976; the Carter Administration sought to "reform" U.S. arms sales through a set of specific guidelines, and it undertook discussions with the Soviet Union regarding international restraints.

Long the world's largest supplier of arms, during the period 1950–80 the United States transferred abroad over $120 billion in arms and related military services, more than half of the world's total. Under the Reagan Administration, with its strong emphasis on arms sales as an instrument of diplomacy, and its tendency to sell weapons permissively, arms sales are likely to continue to grow and become still more controversial.

In retrospect, the Carter Administration's handling of arms sales is easy to criticize. Certainly the reality did not match the overblown and moralistic rhetoric, and arms sales were never relegated to the status of being an "exceptional" instrument of foreign policy as promised in the Administration's early days. The policy guidelines—e.g., that the United States would not be the first supplier to introduce into a region newly developed, advanced weapons systems that would create a new or significantly higher combat capability; that it would not permit development or modification of advanced weapons systems solely for export; that it would not permit co-production agreements with other countries, etc.—were frequently not observed. The annual dollar ceilings on new arms sales, under which there was to be a progressive reduction each year, were so artfully circumvented (by excluding treaty allies, and exports classified as "commercial" arms sales or military services) that while the ceilings were formally respected and sales were theoretically reduced, in reality total arms sales increased. And the Conventional Arms Transfer talks with the Soviet Union collapsed more because of internal feuding within the Administration and a lack of clarity as to aims than because of substantive disagreement with the Soviet Union at the negotiating table.

Nevertheless, the Carter policy forced arms sales to be measured more carefully against overall foreign policy and national security considerations than had been the case in the Nixon-Kissinger years. The Arms Export Control Board introduced a new discipline into the decision-making process in Washington. In theory, at least, the burden of persuasion was shifted from the opponents of a sale to the proponents, thereby adding requirements for analysis and long-range planning. The specific guidelines, although applied with much flexibility and frequent exceptions—how could it really be any different?—did provide a way of justifying turndowns when friendly governments requested arms which the Administration concluded should not be transferred. Altogether, 614 requests from 92 countries totaling more than one billion dollars were turned down in the first 15 months of the Administration. (After the invasion of Afghanistan, as the Administration's foreign policy assumptions changed, arms were sold more freely.) In addition, human rights considerations were given a new prominence in the making of arms sales decisions, although here too there was flexibility—while sales to authoritarian Latin American regimes were barred, they were continued to South Korea and other nations where the United States has more direct security interests.

The Reagan Administration in its first nine months has sought to accentuate the difference in its approach toward arms sales. Addressing the Aerospace Industries Association, Under Secretary of State for Security Assistance, Science and Technology James L. Buckley observed that the Carter Administration had adopted policies on the sale of arms that "substituted theology for a healthy sense of self-preservation." The Reagan Administration would view arms sales as an essential element of the U.S. global defense posture; it would "face up to the realities of Soviet aggrandizement," as it pursued a sober, balanced and responsible arms transfer policy, essential for the protection of U.S. interests. The Administration's arms transfer policy statement, issued in July, contrasted sharply with Carter's of four years earlier. "We will deal with the world as it is," the policy statement concluded, "rather than as we would like it to be." Clearly the policy emphasis is no longer on restraints on arms sales and on the dangers posed by conflict within the Third World but rather on employing arms sales to respond to the Soviet global challenge.

The new direction involves more than just tone and emphasis. Carter's specific guidelines prohibiting certain types of sales have been replaced by a list of broad-gauged considerations in making arms transfers which stress the contributions they can make to "enhanced deterrence and defense." The annual ceiling on the total value of arms sales has been dropped, wisely, as it had become meaningless. No reference whatsoever is made to human rights as a factor in arms sales decision-making. In addition, a number of steps have been taken: (1) the Administration early on rescinded the "leprosy letter," a Carter directive which discouraged American representatives abroad from initiating discussions on, or stimulating interest in, the purchase of U.S. weapons by foreign governments unless authorized by Washington, and even from assisting American businessmen to do the same; (2) Congress was asked to increase security assistance, through which some arms sales are financed, by 30 percent (while funds for development assistance were to be reduced by 26 percent); (3) Congress was also asked for $350 million to create a Special Defense Acquisition Fund which would be used to purchase in advance some arms which countries were likely to request but which due to long manufacturing lead times would not be available without considerable delay once a sale was approved—a sort of "arms-for-sale" inventory; (4) the Administration sought to raise the dollar thresholds at which proposed military sales must be reported to the Congress from $7 million to $14 million in weapons and $25 million to $50 million in other defense articles and services.

President Reagan has also sought to enhance his flexibility in using arms sales as a political instrument by repealing some legislative restrictions which had been enacted during the past decade. The Administration asked that a ban on arms sales to Argentina, due to its human rights record, be lifted because of Argentina's strategic location along vital lines of communication in the southern Atlantic as well as its natural resources. Similar action was sought with respect to Chile. The Administration also urged the repeal of the Clark Amendment which prohibited military assistance to factions in Angola, because it was restricting policy options, although some members of Congress argued strongly that its repeal would adversely affect efforts to negotiate an end to the conflict in Namibia and alienate some black African countries. And, with Pakistan in mind, Congress was also asked to amend the Symington Amendment so that military assistance might be provided to that country despite its ongoing nuclear program which could lead to a weapons capability. (Most of these restrictions are presently being lifted, albeit with legislative reservations.)

A cornucopia of arms sales has marked the first nine months of the Reagan Administration. In the largest arms deal in history, the United States sold to Saudi Arabia not only the five AWACS aircraft but also 1,177 advanced Sidewinder air-to-air missiles, six K-135 aerial refueling aircraft and conformal fuel tanks to enhance the range of the 60 F-15 fighters sold in 1978—for a total value of $8.5 billion. Israel was promised additional F-15 fighters and was told that past restrictions on the export of its Kfir fighter, containing an American engine, would be dropped. Jordan was sold Cobra helicopters armed with anti-tank missiles. Morocco was told that it would receive 108 M-60 tanks (the Carter Administration had insisted that Rabat "qualify" for such arms by making moves toward resolving conflict with the Polisario guerrillas in the Western Sahara). Arms transfers to Egypt were accelerated after the death of Sadat. Pakistan was promised F-16 fighters and sophisticated radar equipment as part of a $3.2 billion package of military credits and economic aid over six years. The

F-16 was also offered to Venezuela and South Korea (the latter was in the works at the end of the previous Administration).

With perhaps more fanfare than was warranted, restrictions on the sale of "lethal weapons" to the People's Republic of China were removed. El Salvador was sent military aid and advisers. Arms were sent to Guatemala for the first time since 1977, and the Administration discussed sending military assistance to Argentina and Chile. In addition, the transfer of arms to Somalia, Sudan, Tunisia, Turkey and the anti-Marxist element in Angola were either approved or sought from the Congress.

After the vote on the AWACS, the most contentious of these may be the sale of 40 F-16s to Pakistan. With Soviet troops in neighboring Afghanistan, the Reagan Administration, like its predecessor, seeks to buttress Islamabad through economic and military aid. It is willing, however, to go considerably further than Jimmy Carter (his $400-million offer, it will be recalled, was rejected by General Zia ul-Haq as "peanuts"), with a larger military program and more advanced weapons intended to strengthen Pakistani resistance along its northwestern frontier. But many of these weapons could also be used against the traditional enemy, India, and Prime Minister Indira Gandhi has been outspoken in her objections to the F-16s in particular. There is much to be said for providing in their place the new shorter range FX, as suggested by the U.S. Air Force, which has seen it as adequate for Islamabad's purpose. The end result of providing the F-16s is likely to push New Delhi into buying French Mirage 2000s or MiG-25s, in addition to the Soviet MiG-23s it is already receiving, thereby notching up a regional arms race which these two poor countries can ill afford. The underlying policy challenge is how to satisfy Islamabad's legitimate defense requirements without supplying arms that could be used to undermine India's security. (India, it should be noted, will retain the military advantage in any case.)

Another sale which should be subjected to close scrutiny is that of 16 to 24 of the F-16s to Venezuela. Such a sale would set an important and unfortunate precedent in all of Latin America. Up to now none of the supplier countries has sold its most advanced supersonic fighters to nations in the southern hemisphere. Caracas' request has been viewed sympathetically because the country is stable and democratic (unlike Pakistan!), and the government of Luis Herrera Campins has supported U.S. policy in Central America and the Caribbean, including the Reagan Administration's approach to El Salvador. In addition, the United States imports about four percent of its crude oil from Venezuela.

Nonetheless, Venezuela has no serious security problem which justifies the F-16. Testifying before the Senate Foreign Relations Committee, Under Secretary of State Buckley cited the threat to Venezuela emanating from Cuba. Surely this is a highly questionable justification. Selling the F-16 to Venezuela would break the tacit threshold on sophisticated jet fighters to Latin America and would be a matter of real concern to neighboring Colombia. It would, moreover, make it more difficult to turn down other nations which requested the F-16 without a legitimate security need for it. If Venezuela is to receive it, why not Argentina, Brazil, Chile, Peru or Mexico?

Indeed, what may now be at stake is the whole notion of the FX export fighter as one specifically designed to meet the future needs of Third World countries without transferring top-of-the-line F-15s, -16s, and -18s. For two decades the standard fighter sold by the United States abroad has been the Northrop F-5, a good and relatively inexpensive fighter of limited capabilities. More than 1200 of these aircraft have been sold to 27 countries. Recognizing that a number of Third World nations would want to replace their F-5s (Taiwan has been the case in point), but not wanting to make available the most advanced aircraft, the Carter Administration decided to permit the development of an intermediate performance fighter (thereby breaking its no-arms-for-export-only guideline).[2] In theory, the FX would be the ideal plane for Third World countries that require middle-level aircraft that are still less expensive than the first-line ones, easier to maintain, and of more limited range, thus preventing the exacerbation of some regional arms rivalries.

Thus far, the only country outside NATO that has the F-16 is Israel, and its sale has been approved for Egypt and South Korea. If, however, Pakistan, with its grave financial difficulties, and Venezuela, without real military requirements, are able to obtain the high-performance F-16, then this will undermine the viability of the concept of the FX export fighter and could well launch a race for acquiring F-16s.

Finally, another difficult issue today is the conundrum involving arms sales to China and Taiwan. Even though Taiwan's air force is well equipped with 200 F-5s and other aircraft, it has been seeking a more advanced fighter. The Carter Administration turned down its request for F-4s on the ground that the fighter's 1,000-mile range would be provocative to China. Now Taiwan is lobbying hard for the still more advanced FX. Yet there is no persuasive military rationale for providing the FX: it is not necessary for the defense of the Taiwan straits, would be superior to anything China possesses, and tensions in the Taiwan region are low. The Nationalist leadership, however, sees it as an important symbolic test of America's fidelity to its old ally and this strikes a receptive chord in the Reagan White House.

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[2] Two models of the FX are in competition, the General Dynamics F-16/79 (a scaled-down version of the F-16) and the Northrop F-5G (a major improvement on other F-5s).

Beijing, on the other hand, has made it clear that it would find the sale of the FX totally unacceptable. It would prefer to forgo any purchase of American arms rather than accept this sale and has even indicated that it might downgrade its official relations with Washington if the transfer is made. (This was done to the Netherlands after it sold submarines to Taiwan.) For the Reagan Administration, which is eager to follow up on Secretary Haig's June trip by selling to China some "lethal" but "defensive" arms, such as TOW anti-tank missiles, the choice is painful. The truth is that American arms have been flowing to Taiwan abundantly since the year's grace period after the normalization with Beijing, and will continue to do so. A $500-million package is planned for this year without the FX. Even for symbolic purposes, that should be sufficient.

The Reagan approach to arms sales is downplaying two considerations which in recent years have served to restrain the transfer of weapons. One is human rights. This is most evident in Latin America, where the emphasis is now on hemispheric security and the competition for influence with the Soviet Union—and especially the perceived threat from Cuban- and Soviet-supported subversive activities in Central America—rather than economic development or human rights.

The second change has involved nuclear nonproliferation concerns, notably in the case of Pakistan. There can no longer be much doubt that Pakistan is making great efforts to become a nuclear power, and seeks to acquire a nuclear explosive capability. Selling large quantities of arms to Pakistan without a firm commitment that it will forego the actual development of atomic weapons cannot help but reduce whatever leverage the United States has over Islamabad on this very sensitive and important question. It may also induce New Delhi to renew its own military nuclear program and recommence explosions. This is a tough policy dilemma on which there may be no good choice. But to argue, as has the Administration, that selling large quantities of conventional arms to Pakistan would take care of its security needs, thus blunting the quest for nuclear arms, is self-deceiving.

Indeed, the real danger is that the Pakistanis might interpret it as a tacit acceptance of their developing the bomb.

Arms sales now have a central role in American diplomacy. They are an important dimension of the peacemaking and stabilization process in the Middle East. They are a major component of America's approach toward competition with the Soviet Union on a global basis, perhaps *the* major instrument for action overseas short of the direct use of U.S. armed forces. The risk is that we may overvalue this instrument. Nations pursue their interests. Their friendship or foreign policies cannot long be "bought" with weapons. Today's ally may be tomorrow's enemy—witness the American experience in Iran and the Soviet Union's in Egypt. Under the Carter Administration, arms sales policy was inconsistent and perhaps overly restrictive. In the Reagan Administraion it runs the risk of being overly permissive.

VIII

Clearly, the need for some international restraints on the transfer of arms is greater than ever. Unfortunately, this is not an auspicious time for new initiatives in this regard, given the marked deterioration in Soviet-American relations and the current European-American difficulties. Any specific proposals for early action would have a distinct air of unreality.

Nonetheless, it is not too early to think constructively about the problem. That the Third World is likely to be an increasingly unstable environment in the coming decades, with a propensity for conflict, is by now a widely accepted judgment. Yet we have not even begun to sort out "rules of the game" to maintain a lid on the competition between the Soviet Union and the West in the Third World. Restraints on the competitive transfer of arms should be an important component of such an undertaking. Nor is there a system for regular consultations between the United States and its European allies on arms sales to the developing world. This global problem is not discussed in NATO because it is thought to be outside of its charter. Yet uncoordinated Western arms sales, without an accepted "code of conduct," can undermine regional balances and may also conflict with the diplomacy of other Western nations in such a way as to prevent a political evolution desired by all of them.

A brief examination of the Conventional Arms Transfer (CAT) talks with the Soviet Union is in order.[3] The Carter Administration, shortly after coming into office, broached the subject of cooperative restraints on arms sales with the European allies. Responses ranged from expressions of interest and support to skepticism. A consistent theme in the European responses was the need to involve the Soviet Union at the first stage. Thereupon the Administration focused all its energy on Moscow and the Europeans were let off the hook, indefinitely.

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[3] For a more complete account see my *The Global Politics of Arms Sales*, Princeton: Princeton University Press, forthcoming 1982, pp. 285–91.

Four rounds of negotiations were held between the United States and the Soviet Union from December 1977 to the collapse of the CAT talks in Mexico City just one year later. To the surprise of many, the discussions proceeded quite smoothly. By the end of round three it was agreed that restraints might be both regionally oriented and global, and that restrictions might be "military-technical" on certain types of weapons or "political-legal" in nature. These, it was thought, could lead to "harmonized guidelines" on restraints.

At the next round, the United States proposed to discuss transfers to Latin America and sub-Saharan Africa, but the delegation was instructed at the last minute to refuse to even listen to any discussion of the Soviet-proposed regions of West Asia and East Asia, the former including Iran and the latter China and South Korea. A deep split had developed between the American negotiators, headed by Leslie Gelb of the Department of State, and the White House. The latter was no doubt influenced by the pending normalization of relations with China and the unstable situation in Iran.

But the split also reflected the conflicting conceptions within the Carter Administration regarding policy toward the Soviet Union, especially with respect to the East-West competition in the Third World. If the Europeans had been involved in the negotiations it would have given the resulting Western position, based on alliance consultations, greater ballast, thereby making it less vulnerable to Washington's internal struggles.

Any future attempt to develop cooperative, multilateral regulation of arms sales should be undertaken in the following manner:

First, priority should be placed upon arrangements between the West European suppliers and the United States rather than the negotiation of Soviet-American accords. The latter is a long-term aim, which will remain difficult to achieve because of the basic East-West political and ideological competition in the Third World. On the other hand, there already is a pressing need for greater cooperation within the West on policies in dealing with Third World instabilities. In the Middle East and Persian Gulf, for example, a coordinated approach on arms sales could become an important component of an overall, more unified foreign policy toward the area. The present pattern of competitive, uncoordinated sales to a country or region can be contrary to Western political interests. There is too much truth to the statement: "If we don't sell, someone else will."

An initial step would be for the principal Western arms suppliers to undertake foreign policy consultations on political and security developments within regions and specific countries. Little of this takes place today on a systematic basis, that is to say short of significant crises, because the institutional base does not exist in NATO or elsewhere. Although important differences in assessments, interests, and the preferred policies to be followed would surely emerge, such consultations would on the whole be beneficial and would also provide a forum for discussing prospective arms transfer decisions.

A next step might be to adopt a "market-sharing" approach toward Western sales to the Third World. This could be organized along geographical lines, by segments of military technology, or by some combination of the two. France, for example, might take the lead in arms sales to black Africa and the United States to Latin America. Or Britain might specialize in naval ships, France in various types of missiles and the United States in advanced fighters. Because such a division of labor would have great economic consequences it would be absolutely essential that it be equitable. The United States, as by far the largest weapons producer and exporter within the West, might be called upon to reduce its share of the world market. But such a specialization could also permit larger production runs, and thereby lead to substantial economies of scale. The economic necessity to export arms, as in France for example, might be reduced.

An important side benefit of European-American arms sales coordination would be to help realize the NATO goal of achieving greater standardization of weapons systems within the Alliance. Specialization of markets, by guaranteeing certain arms manufacturing capacities, would reduce the pressures within Europe for keeping viable all sectors of separate national arms industries. Collaboration in sales abroad could encourage the rationalization of defense efforts within NATO. Too often, arms sales to the Third World have been used as an excuse to keep open inefficient weapons production lines.

But it is the political benefits that would be paramount. The adoption by the Western producers of a suppliers' "code of conduct" could help ensure that arms sales are kept within the confines of foreign policy goals that are in the interest of the noncommunist world. Too often in the past, unbridled economic competition for arms sales has resulted in politically undesirable weapons transfers.

Second, at the point when the international atmosphere has become considerably more propitious than today, and after consultations have been held within the West, a new attempt should be made to discuss arms sales with the Soviet Union. This time, however, the Europeans should be full partners from the outset. Initially the discussions should involve a frank exchange of views on regional security and local political developments in sensitive areas. There may be common incentives to seek to insulate some local conflicts from East-West tensions. When interests sharply conflict, as they inevitably will at times, such discussions may provide a venue for crisis management. Maintaining contact can reduce some misunderstandings of each other's purposes and foster much needed predictability in a period of tension or crisis.

It would be unrealistic, of course, to expect the Soviets to call a halt to their use of arms transfers as an instrument of policy, and even in the West there would be resistance to following such a course of self-denial. But we should seek some "rules of the game" that introduce a pattern of restraint. The understanding worked out after the 1962 Cuban missile crisis regarding the nontransfer of "offensive" weapons to the island may provide one type of precedent.

Can the Soviets really be drawn into some form of multilateral restraints? The constructive spirit with which they approached the CAT negotiations suggests that it is not hopeless. They may see some advantages in damping tensions and conflicts in some parts of the world and, as earlier noted, their own experience with arms sales in such places as Indonesia, Egypt and Somalia has been far from satisfactory. But let us be skeptical about Soviet motivations. Moscow could see such negotiations as a way of restraining Western sales to China. It could seek to use them to drive a wedge between the United States and its allies. And it could use the negotiations as a way of placing a lid on Western transfers, given that in the long run the West has a greater capacity to increase arms sales than does the Soviet Union.

Third, the suppliers should seek to involve the recipients in planning for restraints. The political and psychological dimensions are important. Proposals for restraint should not be seen as inherently discriminatory. For some time such proposals were characterized as arrogant manifestations of paternalistic attitudes. But in the past several years Third World attitudes have been gradually changing, as evidenced in U.N. debates. Now there is an emerging tendency to see arms sales as a mechanism by which the industrialized world manipulates the developing nations, creating new forms of dependence and drawing them into the superpower confrontation.

Both of these points of view are extreme. The best plans for restraint would be regionally based, involve intensive discussions between the producers and the purchasers regarding real security needs, and should lead to a kind of symbiotic relationship beneficial to all.

In undertaking the above steps it should be borne in mind that the challenge is to *manage* the process of arms sales so as to enhance international security. Of themselves arms sales are neither "bad" nor "good"—it all depends upon how they are used—so that there is no a priori case for either reducing or increasing them. An arms control approach is desirable, but to be successful, care must be taken that it is not artificially separated from the realities of foreign policy. Arms sales, whether we like them or not, have become a common coin of today's world politics. Because they are instruments of diplomacy as well as of security, they will gain in currency in the years to come.

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U.S. Congressional Budget Office. Resources for defense: a review of key issues for fiscal years 1982-1986. Washington, For sale by the Supt. of Docs., U.S. Govt. Print. Off., 1981. 125 p.

"As the Congress considers appropriate levels of defense spending for fiscal year 1982 and beyond, one of its key concerns will be allocating any further increases among competing defense requirements."

U.S. General Accounting Office. Sharing the defense burden: the multinational F-16 aircraft program, Department of Defense; report to the Congress by the Comptroller General of the United States. [Washington] 1977. 34 p.
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U.S. Library of Congress. Foreign Affairs and National Defense Division. The modernization of NATO's long-range theater nuclear forces; report prepared for the Subcommittee on Europe and the Middle East of the Committee on Foreign Affairs, U.S. House of Representatives. Washington, U.S. Govt. Print. Off., 1981. 80 p. UA646.3.L84

----- NATO after Afghanistan; report prepared for the Subcommittee on Europe and the Middle East of the Committee on Foreign Affairs, U.S. House of Representatives. Washington, U.S. Govt. Print. Off., 1980. 64 p.
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Van Campen, S. I. P. NATO: a balance sheet after thirty years. Orbis, v. 23, summer 1979: 261-270.
Reassesses NATO's accomplishments after the first thirty years, focusing on the military and the political role of the Alliance.

The War game. Washington post, Nov. 15, 1981: A1, A25; Nov. 15: A1, A24; Nov. 16: A1, A10-11; Nov. 17: A1, A27; Nov. 18: A1, A26; Nov. 19: A1, A10; Nov. 20: A1, A24.
Contents.--NATO strategy questioned, by B. Graham.--German heartland uneasy.--NATO's nuclear strategy devised in political vacuum, by W. Pincus and B. Graham.--Ban the bomb: growing protest movement seeks neutral 'calm space', by L. Downie, Jr.--Arms decision stirred storm around NATO, by W. Pincus.--U.S. bombers in Britain become superpower pawns, by L. Downie, Jr.--Allies seeking greater role in nuclear weapons policy, by W. Pincus.

Weinberger, Caspar W. United States defense policy. Atlantic Community quarterly, v. 19, fall 1981: 259-263.
Reviews some vital interests of NATO countries and suggests ways of achieving greater collective defense capabilities. Surveys the U.S. defense budget, plans for improving U.S. military force capabilities, and the Reagan Administration's commitment to arms control.

Weiss, Seymour, and Kenneth Adelman. A critical phase in trans-Atlantic relations. Strategic review, v. 9, spring 1981: 24-34.
"The current trans-Atlantic stresses in NATO are the accumulation of hardening differences in political, economic and security perceptions, with growing emphasis on such problem areas as East-West detente, the shifting balance of power and the defense of common interests beyond the NATO region."

Western security: what has changed? what should be done? New York, Council on Foreign Relations; London, Royal Institute of International Affairs, 1981. 48 p. UA646.3.W47

III. RESOLVED: THAT THE UNITED STATES SHOULD SIGNIFICANTLY CURTAIL ITS ARMS SALES TO OTHER COUNTRIES

Alexander, Archibald S. Arms transfers by the United States: merchant of death or arsenal of democracy. Vanderbilt journal of transnational law, v. 10, spring 1977: 249-267.

"This article deals with transfers of all kinds of non-nuclear arms from or by the United States, and it examines all types of transfers including grants, transfers on credit, government to government sales, and commercial transactions in which the seller is part of the private sector of the United States. There is an analysis of statutory law and applicable international agreements, followed by a description of the machinery that the United States Government uses to make decisions regarding transfers."

Ball, Nicole, and Milton Leitenberg. The foreign arms sales of the Carter Administration. Bulletin of the atomic scientists, v. 35, Feb. 1979: 31-36.

"As a presidential candidate, Mr. Carter pledged to reduce U.S. involvement in the conventional arms trade. His administration, however, is not behaving much differently than its predecessors."

Benson, Lucy Wilson. Controlling arms transfers: an instrument of U.S. foreign foreign policy. Dept. of State bulletin, v. 77, Aug. 1, 1977: 155-159.

Address by Under Secretary for Security Assistance, Science, and Technology.

----- Turning the supertanker: arms transfer restraint. International security, v. 3, spring 1979: 3-17.

The Carter Administration's conventional arms transfer restraint policy: a retrospective look at what had been accomplished and what may be expected for the future.

Blessing, James A. The suspension of foreign aid: a macro-analysis. Polity, v. 13, spring 1981: 524-535.

Examines the efficacy of suspending aid as a tactic to pressure other countries into acceding to U.S. demands. Analyzes 126 cases from 1948-1972, involving 59 countries, in which U.S. aid was suspended. Concludes that suspension of aid is not likely to cause the recipient country to alter its behavior in the direction desired by the U.S.

Buckley, James L. Arms transfers and the national interest. Washington, U.S. Dept. of State, 1981. 3 p. (Current policy no. 279)

"An address by James L. Buckley, Under Secretary of State for Security Assistance, Science and Technology, before the Aerospace Industries Association in Williamsburg, Virginia, May 21, 1981."

Bussert, Jim. U.S. overlooks Latin America arms market. Defense electronics, v. 13, Nov. 1981: 37-40, 45-46.

Briefly surveys Soviet military assistance to Cuba and Marxist initiatives in Latin America. Considers U.S. arms sales policies toward individual Central and South American countries, profiles their defense needs, and lists weapons and military equipment they have purchased from other countries.

Clark, Dick, and Bernard A. Schriever. U.S. arms sales abroad, a policy of restraint? Washington, American Enterprise Institute for Public Policy Research, 1978. 28 p. (AEI defense review, v. 2, no. 5)
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Congressional Quarterly, inc. U.S. defense policy: weapons, strategy and commitments. Washington, 1980. 130, 89-A p.

Contents.--Defense spending.--SALT II.--MX missile.--Nuclear non-proliferation.--Uranium sale to India.--Navy future.--Combat readiness.--Rapid deployment force.--Middle East.--NATO Alliance.--Arms sales policy.--Arms control.--Draft registration.--All-volunteer force.-Military pay and benefits.--Military dependents overseas.

Controversy over the scope of U.S. arms shipments abroad. Congressional digest, v. 57, Apr. 1978: 99-128.

Contents.--Role of military assistance in the U.S. foreign aid program.--Government-to-government.--Commercial sales.--The President's arms transfer policy statement.--Action in Congress since 1976.--Should Congress now apply greater restraints on transfers of U.S. arms abroad?

Conventional arms sales in the Carter Administration. Arms control today, v. 10, Sept. 1980: 1-9.

Contents.--Dilemmas of restraint, by M. Salomon and D. Louscher.--An interview with Leslie Gelb.

Cordesman, Anthony H. The changing military balance in the Gulf and Middle East. Armed Forces journal international, v. 119, Sept. 1981: 52, 54-56, 58, 60.

Describes the strategic importance of Saudi Arabia to the U.S. Assesses the military threat to Saudi Arabia and the Persian Gulf, and considers the extent to which U.S. military assistance to Saudi Arabia, including the sale of AWACS, could counter that threat.

Farley, Philip J., Stephen S. Kaplan, and William H. Lewis. Arms across the sea. Washington, Brookings Institution, 1978. 134 p.
HD9743.U6F37

"This study assesses U.S. policy toward the international trade in arms. Dealing with military assistance, government and commercial sales, and technological contributions to foreign production capabilities, the authors suggest how each might be used to promote the interests of the United States and international security. In the belief that U.S. withdrawal from the arms trade would do nothing to reduce its intensity, they argue for discriminating judgment and selectivity in decisions by U.S. officials. . . ."

Frye, Alton. How to ban the Bomb: sell it. New York times magazine, Jan. 11, 1976: 11, 76-79.

"'If we forgo nuclear weapons and our neighbors do not, who will protect us?' ask small countries. To provide a credible answer, nuclear powers may have to spread deterrence around."

Gelb, Leslie H. Arms sales. Foreign policy, no. 25, winter 1976-1977: 3-23.

"The United States should approach arms sales as a foreign policy problem, not as an arms control problem. Sales are so intertwined with other matters that they have to be treated on a country-by-country basis with decisions based on pragmatic tradeoffs," argues the author.

Gordon, Michael R. Competition with the Soviet Union drives Reagan's arms sales policy. National journal, v. 13, May 16, 1981: 868-873.

"The Administration, fearing Soviet gains, is relaxing the foreign arms sales control imposed, though never rigidly enforced, by the Carter Administration."

Graham, James H. The General Accounting Office and foreign military sales. Air Force law review, v. 19, spring 1977: 76-89.

"What is the GAO's authority to dictate how the executive branch, specifically the Department of Defense, purchases goods and services for foreign governments? This comment attempts to answer this question in relation to the most difficult form of foreign military sale, the 'cash' sale. It briefly discusses the origin of the cash sale and the gradual maturation of current statutory procedures."

Hammond, Paul Y., David J. Louscher, and Michael D. Salomon. Controlling U.S. arms transfers: the emerging system. Orbis, v. 23, summer 1979: 317-352.

This article assesses "the dynamics of the decision process by which the U.S. government chooses to sell or not sell arms to other nations. The focus is on the control mechanisms that have emerged within the various agencies processing arms-sales decisions."

----- Growing dilemmas for the management of arms sales. Armed Forces and society, v. 6, fall 1979: 1-21.

The article discusses the role of U.S. Military Assistance Advisory Groups as one instrument for establishing United States presence in friendly governments. Until 1976 the MAAG's advisory and management functions were sizable, but were later reduced for the fear of too much autonomy of the field personnel.

Harrison, Selig S. Fanning flames in South Asia. Foreign policy, no. 45, winter 1981-1982: 84-102.

Critiques U.S. military assistance to Pakistan in light of political conditions, ethnic tensions, and international relations in South Asia. Suggests that "instead of exacerbating Indo-Pakistani tensions and fostering a South Asian arms race, the United States should have encouraged the impulses for a concerted response to the Soviet challenge in Afghanistan that were beginning to stir in New Delhi and Islamabad during the latter part of 1980."

Hartung, William. Weapons for the world/1982 update: the corporate role in foreign arms transfers. New York, Council on Economic Priorities, 1981. 6 p. (Council on Economic Priorities publication 81-7)

Kaplan, Fred. Still the merchants of death. Progressive, v. 40, Mar. 1976: 22-25.

"Arms sales are a substitute for policy . . . when we can't think of anything else," concludes the author, attacking the rationale for arms sales.

Kaplan, Stephen S. The Carter Administration grapples with the issue of conventional arms control. Stanford journal of international studies, v. 14, spring 1979: 71-88.
Examines the Carter Administration's arms transfer policy, the efforts for conventional arms control and arms control uncertainty due to the realpolitik and security interests of the United States.

Klare, Michael T. America exports its know-how. Nation, v. 224, Feb. 12, 1977: 173-178.
In order to establish control on arms sales the United States must also control the export of military technology.

----- Arms and the Shah: the rise and fall of the 'surrogate strategy.' Progressive, v. 43, Aug. 1979: 15-21.
"While many factors undoubtedly contributed to the downfall of the Shah, the most critical may have been the ill-conceived U.S. arms supply program." The article identifies some of the principal features of the misguided U.S. arms program.

----- The arms overstock. Harper's magazine, v. 259, Nov. 1979: 24-26, 28-29.
"Any significant cutbacks in military exports will probably cause dislocations in the arms industry. . . . Furthermore, by restricting the export of arms to shaky governments in the Middle East, the United States would reduce the risk of 'another Iran,'" contends the author.

----- Arms, technology & dependency--U.S. military co-production abroad. NACLA's Latin America & empire report, v. 11, Jan. 1977: 25-32.
Provides a chart of U.S. military co-production projects abroad. Concludes that "the switch from direct arms sales to military technology transfers enhances rather than diminishes U.S. political influence abroad. By threatening to cut off supplies of critical materials and components, Washington can imperil an entire production line representing many millions of dollars in initial investment."

Leepson, Marc. America's arms sales. [Washington] Editorial Research Reports, 1979. 327-344 p. (Editorial research reports, 1979, v. 1, no. 17)
"Government-to-government transfers of conventional weapons--not nuclear arms--have been an integral part of American foreign policy since World War II. Recent events in the Middle East seem to indicate that at least for the immediate future U.S. arms shipments abroad will continue to play an important role in the relationship between this country and its allies."

Louscher, David J. The rise of military sales as a U.S. foreign assistance instrument. Orbis, v. 20, winter 1977: 933-964.
"In exploring the amplification of arms sales as an instrument of U.S. foreign policy, this study illustrates the impressive size and growth of FMS [Foreign Military Sales]; discusses the attitudes that favored the inception of the program; examines the factors that contributed to its increased growth; describes its multiple purposes; and lastly considers the apparent decline in support for FMS."

Louscher, David J., and Michael D. Salomon. New directions and new problems for arms transfers policy. Naval War College review, v. 35, Jan.-Feb. 1982: 40-47.

"The high demand environment of the international system, as well as extensive competition for markets, influence, or penetration prevented the Carter administration from implementing its arms transfer restraint policies or realizing its arms transfer restraint objectives.

Luck, Edward C. Does the U.S. have a conventional arms sales policy? Arms control today, v. 6, May 1976: 1-4.

"The pace of U.S. arms transfers has more than doubled over the last ten years, while the principal means of financing has shifted from aid to sales, which now constitute more than 95 percent of the total."

MacNeil, Robert, and Jim Lehrer. AWACS flak. New York, WNET/Thirteen, 1981. 9 p.

The MacNeil/Lehrer Report, Sept. 22, 1981.

A television interview with Richard Allen, National Security Advisor; Sen. Joseph Biden, Democrat, Delaware; and Sen. Richard Lugar, Republican, Indiana.

Morrison, S. Scott. The Arms Export Control Act: an evaluation of the role of Congress in policing arms sales. Stanford journal of international studies, v. 14, spring 1979: 105-124.

"This article analyzes the A.E.C.A. in order to determine whether the Act can effectively limit U.S. involvement in the arms trade. Part I examines the provisions of the A.E.C.A. regulating sales of American weapons abroad. Part II analyzes the role of Congress under the A.E.C.A."

Nuclear proliferation: nuclear export policies of major nations. International currency review, v. 13, Mar. 6, 1981: 66-70.

"In the early 1970s, the United States lost its monopoly over the supply of nuclear material, equipment and technology. Other countries-- West Germany, France, the United Kingdom, Canada and more recently, Japan-- have developed the capability to compete in an expanding world-wide market for nuclear power facilities. . . . We examine the export policies of leading Western countries, touching upon the nuclear proliferation risks involved. France has been behaving especially irresponsibly."

Pierre, Andrew J. Arms sales: the new diplomacy. Foreign affairs, v. 60, winter 1981-1982: 266-286.

Surveys trends in arms sales, especially to developing countries, in light of transformations in the international system. Considers arms sales as an instrument of diplomacy for weapons suppliers. Reviews arms sales policies and practices of the U.S.S.R., France, and the United States. Discusses the prospects for international restraints on arms transfers.

----- The global politics of arms sales. Princeton, N.J., Princeton University Press [1982] 353 p. HD9743.A2P5

"A Council on Foreign Relations book"

Partial contents.--Dilemmas.--Suppliers: United States, Soviet Union, France, United Kingdom; The Restrictors: West Germany, Japan, Sweden, and Switzerland; New, Third World suppliers.--Recipients: Middle East, Asia, Latin America, Sub-Saharan Africa.--Restraints.

Pranger, Robert J., and Dale R. Tahtinen. Toward a realistic military assistance program. Washington, American Enterprise Institute for Public Policy Research, 1974. 48 p. (Foreign affairs studies, no. 15)
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Reed, Stanley F. Dateline Cairo: shaken pillar. Foreign policy, no. 45, winter 1981-1982: 175-185.

Reviews the Sadat era and U.S.-Egyptian relations. Suggests that the positive impact of U.S. economic and military assistance programs may be overshadowed by the negative impact of their scale and the resultant feeling among Egyptians that the U.S. Embassy is running Egypt.

Rogers, F. Michael. The impact of foreign military sales on the national industrial base. Strategic review, v. 5, spring 1977: 15-21.

"Foreign military sales benefit the U.S. economy by contributing to a favorable trade balance, supporting U.S. industry with ongoing R&D and production, as well as maintaining employment levels. A sustained level of defense-related industry, crucial to our national economic interests, is an essential element of military readiness," maintains the author.

Rowen, Henry S. Trade in arms: restraint vs. laissez faire. Stanford journal of international studies, v. 14, spring 1979: 89-103.

"Predictably, a policy of limiting arms transfers incurs costs in international relationships. Suppliers and receivers of arms often have overlapping political interests," argues the author.

Rudnick, David. Death of an embargo. Round table, no. 242, Oct. 1978: 355-361.

"Why America resumed arms sales to Turkey."

Salomon, Michael D., David J. Louscher, and Paul Y. Hammond. Lessons of the Carter approach to restraining arms transfers. Survival, v. 23, Sept.-Oct. 1981: 200-208.

Suggests that the threat posed to U.S. and Western European long-term interests by arms transfers to the Third World results not from the volume of the transfers but from poorly rationalized and uncooperative or competitive sales by Western suppliers. Emphasizes that Western suppliers should coordinate their policies.

Schorr, Brian L. Testing statutory criteria for foreign policy: the Nuclear Non-Proliferation Act of 1978 and the export of nuclear fuel to India. New York University journal of international law and politics, v. 14, winter 1982: 419-466.

Comment contends that "by ultimately approving the export applications on broad foreign policy and national security grounds, the President and the Senate undermined the United States' ability to develop a consistent and comprehensive nuclear nonproliferation strategy. At the very least, the NNPA [Nuclear Non-Proliferation Act] should be amended to allow the United States to meet its supply obligations under existing agreements for nuclear cooperation. In this way, the United States will be better able to convince other nations that it is truly serious about limiting nuclear proliferation."

Sherzer, Harvey G., Michael T. Janik, and Allan B. Green. Foreign military sales: a guide to the United States bureaucracy. Journal of international law and economics, v. 13, no. 3, 1979: 545-599.

Contents.--The role of Congress.--Presidential powers.-The role of the executive agencies.--Department of Defense.--Department of State.

Sivard, Ruth Leger. World military and social expenditures, 1981. Leesburg, Va., World Priorities, 1981. 44 p. HJ7469.S58

Smith, Carlton. Making the sale for America. Politics today, v. 5, Mar.-Apr. 1978: 24-27, 48-50, 52, 54.

"How the US merchandises arms abroad."

Stanley, John, and Maurice Pearton. The international trade in arms. New York, Praeger Publishers for the Institute for Strategic Studies, 1972. 244 p. HD9743.A2S7 1972

Sweet, William. Defense spending debate. [Washington, Congressional Quarterly] 1982. 275-292 p. (Editorial research reports, 1982, v. 1, no. 14)

Contents.--Reagan's defense program.--Defense buildup origins.--Future defense concerns.

U.S. Arms Control and Disarmament Agency. World military expenditures and arms transfers, 1970-1979. [Washington, 1982] 134 p. (ACDA publication 112)

This report includes military and economic data which "describe the size, trends and distribution of global military expenditures and the world's arms trade. This information includes the amount of resources devoted to military purposes by individual states, alliances, and the world, the relative burden each of these bear, and a ten-year history for each."

U.S. Central Intelligence Agency. National Foreign Assessment Center. Arms flows to LDCs: U.S.-Soviet comparisons, 1974-77. [Washington] 1978. 13 p. HD9743.A2U67 1978

U.S. Congress. Conference Committees, 1976. Conference report on International Security Assistance and Arms Export Control Act of 1976, H.R. 13680, to amend the Foreign Assistance Act of 1961 and the Foreign Military Sales Act, and for other purposes. [Washington, U.S. Govt. Print. Off.] 1976. 60 p. (94th Cong., 2d sess. House. Report no. 94-1272)

U.S. Congress. Conference Committees, 1981. International Security and Development Cooperation Act of 1981; conference report to accompany S. 1196. [Washington, U.S. Govt. Print. Off.] 1981. 92 p. (97th Cong., 1st sess. House. Report no. 97-413)

U.S. Congress. House. Committee on Appropriations. Subcommittee on Foreign Operations and Related Programs. Foreign assistance and related programs appropriations for 1982. Hearings, 97th Cong., 1st sess. Washington, U.S. Govt. Print. Off., 1981. 100 p.

Part 7--Proposed Airborne Warning and Control System (AWACS); F-15 enhancement equipment; and sidewinder AIM-9L missile sales to Saudi Arabia.

U.S. Congress. House. Committee on Appropriations. Subcommittee on the Dept. of Defense. Department of Defense appropriations for 1982. Hearings, 97th Cong., 1st sess. Washington, U.S. Govt. Print. Off., 1981. 942 p.
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----- Proposed U.S. assistance and arms transfers to Pakistan: an assessment; report of a staff study mission to Pakistan and India, September 30-October 17, 1981. Washington, U.S. Govt. Print. Off., 1981. 54 p.
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----- U.S. security assistance and arms transfer policies for the 1980's. Washington, U.S. Govt. Print. Off., 1981. 18 p. UA12.U537
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Hearings held Sept. 24-Nov. 19, 1981.

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U.S. Congress. House. Committee on Government Operations. DOD's failure to recover nonrecurring research, development, and production costs on foreign military sales; seventh report by the Committee on Government Operations. Washington, U.S. Govt. Print. Off., 1981. [illegible] p. (97th Cong., 1st sess. House. Report no. 97-214)

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----- Review of the President's conventional arms transfer policy. Hearings, 95th Cong., 2d sess. Feb. 1-2, 1978. Washington, U.S. Govt. Print. Off., 1978. 147 p. KF27.I5495 1978

U.S. Congress. Senate. Committee on Armed Services. Military and technical implications of the proposed sale of air defense enhancements to Saudi Arabia; report . . . based upon hearings held before the Committee in accordance with its responsibilities under rule XXV(c) of the standing rules of the Senate together with additional views. Washington, U.S. Govt. Print. Off., 1981. 32 p. (97th Cong., 1st sess. Senate. Report no. 97-242)

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----- Consideration of resolution of disapproval of the sale to Pakistan of 40 F-16 aircraft; report together with minority views to accompany S. Con. Res. 48. [Washington, U.S. Govt. Print. Off.] 1981. 13 p. (97th Cong., 1st sess. Senate. Report no. 97-276)

----- Conventional arms sales. Hearing, 97th Cong., 1st sess. July 28, 1981. Washington, U.S. Govt. Print. Off., 1981. 100 p. KF26.F6 1981r

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---- The proposed AWACS/F-15 enhancement sale to Saudi Arabia; a staff report. Washington, U.S. Govt. Print. Off., 1981. 63 p.
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"The report concludes that President Carter's arms export restraint policy may face major revisions by the executive branch if efforts to multilateralize the restraints fail to produce results. It further concludes that these multilateral efforts face substantial difficulties. The conventional arms transfer negotiations cannot as yet be considered a failure; but they may be on the brink of failure."

----- U.S. arms sales policy. Hearings before the Committee on Foreign Relations and the Subcommittee on Foreign Assistance of the Committee on Foreign Relations, United States Senate, 94th Cong., 2d sess., on proposed sales of arms to Iran and Saudi Arabia. September 16-24, 1976. Washington, U.S. Govt. Print. Off., 1977. 155 p. KF26.F6 1976k

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Provides statistics on U.S. arms sales and military assistance for the period 1970 to 1980.

U.S. General Accounting Office. Defense continues to subsidize sales of secondary items to foreign governments because of poor pricing policies; report by the Comptroller General of the United States. [Washington] 1981. 18 p.
"AFMD-81-105, Oct. 5, 1981"

----- Defense Department is not doing enough to maximize competition when awarding contracts for foreign military sales programs; report by the Comptroller General of the United States. [Washington] 1978. 40 p.
"PSAD-78-147, October 17, 1978"

----- Efforts to charge for using government-owned assets for foreign military sales: marked improvement but additional action needed; report. [Washington] 1979. 21 p. HD9743.U6U59 1979c
"FGMSD-79-36, June 1, 1979"

U.S. General Accounting Office. Financial and legal implications of Iran's cancellation of arms purchase agreements; report by the Comptroller General of the United States. [Washington] 1979. 25 p.
"FGMSD-79-47, July 25, 1979"

----- Foreign military sales--a growing concern, Departments of State and Defense: report to the Congress by the Comptroller General of the United States. [Washington] 1976. 46 p. HD9743.U6U59 1976
"ID-76-51, June 1, 1976"

----- Foreign military sales--a potential drain on the U.S. defense posture, Departments of Defense and State; report to the Congress by the Comptroller General of the United States. [Washington] 1977. 61 p.
"LCD-77-440, Sept. 2, 1977" UA23.3U6 1977a

----- Improperly subsidizing the foreign military sales program: a continuing problem, report to the Congress by the Comptroller General of the United States. [Washington] 1979. 13 p. HD9743.U6U59 1979
"FGMSD-79-16, Mar. 22, 1979"

----- Millions in losses continue on defense stock fund sales to foreign customers; report by the Comptroller General of the United States. [Washington] 1981. 17 p.
"AFMD-81-62, Sept. 10, 1981"

----- Opportunities to improve decisionmaking and oversight of arms sales; report by the Comptroller General of the United States. [Washington] 1979. 79 p. HD9743.U6U59 1979b
"ID-79-22, May 21, 1979"

U.S. Library of Congress. Congressional Research Service. Changing perspectives on U.S. arms transfer policy; report prepared for the Subcommittee on International Security and Scientific Affairs of the Committee on Foreign Affairs, U.S. House of Representatives. Washington, U.S. Govt. Print. Off., 1981. 132 p.
At head of title: 97th Cong., 1st sess. Committee print.

----- Implications of President Carter's conventional arms transfer policy; report to the Committee on Foreign Relations, United States Senate, by the Subcommittee on Foreign Assistance of the Committee on Foreign Relations, United States Senate. Washington, U.S. Govt. Print. Off., 1977. 50 p. E872.U45 1977
At head of title: 95th Cong., 1st sess. Committee print.

U.S. Library of Congress. Foreign Affairs and National Defense Division. Saudi Arabia and the United States: the new context in an evolving "special relationship"; report prepared for the Subcommittee on Europe and the Middle East of the Committee on Foreign Affairs, U.S. House of Representatives. Washington, U.S. Govt. Print. Off., 1981. 70 p. E183.8.S25P73
At head of title: 97th Cong., 1st sess. Committee print.

U.S. Library of Congress. Foreign Affairs and National Defense Division. United States arms transfer and security assistance programs. Prepared for the Subcommittee on Europe and the Middle East of the Committee on International Relations, U.S. House of Representatives. Washington, U.S. Govt. Print. Off., 1978. 175 p.
At head of title: 95th Cong., 2d sess. Committee print.
"U.S. security assistance programs, are now conducted under the following broad categories: the military assistance program (MAP); international military education and training (IMET); the foreign military sales (FMS) program; commercial sales; ship transfers; and security supporting assistance. Within each category, this study summarizes key information on program purposes, legislative authority and limitations, program administration, and current status."

U.S. President, 1977-1981 (Carter). Arms transfer policy; report to Congress. Washington, U.S. Govt. Print. Off., 1977. 107 p.
At head of title: 95th Cong., 1st sess. Committee print.

U.S. defense policy in the 1980s. Daedalus, v. 110, winter 1981: whole issue.
Partial contents.--Toward an American conception of regional security, by M. Nacht.--The superpowers and the Atlantic alliance, by G. Quester.--The Atlantic alliance, by R. Bowie.--Notes on some issues on technology and national defense, by H. Brooks.--Arms control and American defense policy: new alternatives and old realities, by J. Kurzel.--The relevance of arms control in the 1980s, by R. Burt.

Volz, Christian. The legislative veto in the Arms Export Control Act of 1976. Law and policy in international business, v. 9, no. 3, 1977: 1029-1044.
"By enacting the ISAAEC [International Security Assistance and Arms Export Control] Act, Congress sought to infuse ethical restraints into the U.S. foreign aid program and to impose limits on executive discretion."

Weiss, Seymour. President Carter's arms transfer policy: a critical assessment, by Seymour Weiss with Eric Fromm. [Washington] Advanced International Studies Institute [1978] 23 p. E872.W44

Wheelock, Thomas R. Arms for Israel: the limit of leverage. International security, v. 3, fall 1978: 123-137.

"Leverage is defined as manipulation of the arms transfer relationship in order to coerce or induce a recipient-state to conform its policy or actions to the desires of the supplier-state."

A world in arms: geography of the weapons trade. Focus, v. 30, Mar.-Apr. 1980: 1-16.

Contents.--U.S. arms transfers, by J. Husbands.--The Soviet Union in the arms trade.--France in the arms trade, by J. Klein.--Third World arms: the long, long pipeline, by J. Husbands.

A GUIDE TO INFORMATION SOURCES
ON THE 1982 - 1983 HIGH SCHOOL DEBATE TOPIC

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INTRODUCTION

This research guide identifies sources of information about U.S. defense spending and related topics which will be discussed by high school debaters. The guide describes printed indexes and other research tools, and provides appropriate search terms that may be used when consulting these tools.

The guide is constructed to permit the researcher to select the scope and types of information included in the research. Search terms, which may be used separately or in combination, are provided for each resolution of the debate topic:

Resolved: That the United States should significantly alter its nuclear weapons policy. (Nuclear weapons)*

Includes information on nuclear weapons capabilities and policy.

Resolved: That the United States should significantly reduce its commitment to NATO. (NATO)*

Includes background material on the formation of the Alliance; assessments of its effectiveness; finance and burden sharing in the Alliance; NATO modernization.

Resolved: That the United States should significantly curtail its arms sales to other countries. (Arms sales)*

Includes material on arms sales and military assistance provided by the Government; arms sales by industry; the impact of arms sales on the domestic economy; the military-industrial complex.

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*Throughout the guide, the facets will be referred to in the abbreviated form listed in parentheses after the above descriptions.

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BOOKS

Library of Congress subject headings are used in many library catalogs nationwide. This partial listing of subject headings may be used to identify books on the debate topic.

NUCLEAR WEAPONS:	Atomic weapons
	United States--Military policy
	United States--Defenses
	Atomic weapons and disarmament
	Atomic warfare
	Strategic forces--United States
	Deterrence (Strategy)
	Atomic weapons, Tactical
NATO:	North Atlantic Treaty Organization--United States
	North Atlantic Treaty Organization--Defenses
	North Atlantic Treaty Organization--Finance
	North Atlantic Treaty Organization--United States--Finance
	Europe--Defenses
ARMS SALES:	Military assistance, American
	Firearms industry and trade--United States
	United States--Military policy
	Defense contracts--United States
	Munitions--United States
	Industry and state--United States

CFS-2

JOURNAL ARTICLES

PRINTED INDEXES

Citations to journal articles and other materials about the debate topic can be found in a number of printed indexes. The materials covered by the printed indexes are briefly described here. Search terms covering the three resolutions of the debate topic can be found in Table 1.

> AIR UNIVERSITY LIBRARY INDEX TO MILITARY PERIODICALS

The *Air University Library Index to Military Periodicals* is a subject index to significant articles, news items, and editorials appearing in 73 English language military and aeronautical periodicals not indexed in readily available commercial indexing services. The *Index* is issued quarterly with annual cumulations.

> BUSINESS PERIODICALS INDEX

Business Periodicals Index is a subject index to articles appearing in English language business periodicals. The *Index* is issued monthly and cumulated quarterly and annually.

> MAGAZINE INDEX

Magazine Index provides citations to materials in over 370 popular magazines, focusing on coverage of current affairs, leisure time activities, arts, sports, and science and technology. The *Index* is divided into author and subject sections.

> PUBLIC AFFAIRS INFORMATION SERVICE BULLETIN (PAIS)

PAIS is a subject index of books, pamphlets, government publications, reports of public and private agencies, and periodical articles relating to economic and social conditions, public administration, and international relations.

> READERS' GUIDE TO PERIODICAL LITERATURE

The *Readers' Guide* is an author/subject index to periodicals of general interest published in the U.S.

> SOCIAL SCIENCES INDEX

The *Social Sciences Index* is a cumulative index to English language periodicals in the fields of anthropology, area studies, economics, environmental sciences, geography, law and criminology, medical sciences, political science, public administration, sociology, and related subjects. The *Index* is published quarterly with a bound cumulation issued each year.

ONLINE BIBLIOGRAPHIC DATA BASES

Online bibliographic data bases enable the researcher to locate citations to journal articles and other materials quickly by using a computer terminal to search a machine-readable file. Online data bases allow the researcher to combine search terms in ways that are impossible in a printed index or library catalog and to simultaneously search material that would be contained in printed index volumes covering several years. Data bases with text searching capabilities allow the researcher to use search terms in addition to the controlled searching vocabulary.

> PUBLIC AFFAIRS INFORMATION SERVICE BULLETIN AND MAGAZINE INDEX

PAIS and Magazine Index are available online as part of the Lockheed data base system. Brief descriptions of the contents of both of these files appear in the section on printed indexes.

SELECTED PERIODICALS

The following periodicals frequently contain articles on the debate resolution topics:

NUCLEAR WEAPONS:	Strategic Review (quarterly)
	Survival (bi-monthly)
	Washington Quarterly
	Orbis (quarterly)
	Bulletin of the Atomic Scientists (monthly)
NATO:	Atlantic Community Quarterly
	NATO Review (bi-monthly)
	NATO's Fifteen Nations (bi-monthly)
ARMS SALES:	Aviation Week & Space Technology (weekly)
	Defense Week
	Defense and Foreign Affairs Daily
	Strategy Week
	International Defense Review (9 times a year)
	Armed Forces Journal International (monthly)
	Flight International (weekly)
	Interavia (monthly)

TABLE 1 - SEARCH TERMS FOR PRINTED INDEXES

AIR UNIVERSITY INDEX

NUCLEAR WEAPONS:	Nuclear weapons--United States Nuclear weapons--International control Nuclear warfare Missiles Nuclear bombs
NATO:	North Atlantic Treaty Organization Defenses--NATO See also various NATO countries under the terms Appropriations and expenditures--Armed Forces, and Defenses, e.g., Appropriations and expenditures--Armed Forces--Great Britain and Defenses--Great Britain
ARMS SALES:	Arms sales Arms industry and trade--United States Industry and defense Military aid to foreign countries Security Assistance Program Military policy--United States Contracts, government--United States

BUSINESS PERIODICALS INDEX

NUCLEAR WEAPONS:	Atomic weapons Atomic warfare United States--Military policy
NATO:	Europe, Western--Armed Forces Europe, Western--Defenses Europe, Western--Military policy North Atlantic Treaty Organization See also the subdivisions Armed Forces, Defenses, and Military policy under various NATO countries.
ARMS SALES:	Defense industries--Export-import trade Defense industries--International aspects Military assistance, American United States. Department of Defense--Contracts and procurement Military market

MAGAZINE INDEX

NUCLEAR WEAPONS:	Atomic weapons Atomic warfare Atomic bomb Nuclear engineering--International aspects
NATO:	North Atlantic Treaty Organization--Finance Military policy--Europe See also various NATO countries under the term Military policy, e.g., Military policy--Great Britain
ARMS SALES:	Military assistance, American Military policy--United States Defense contracts--Economic aspects Defense contracts--United States Defense contracts--International aspects Defense industries--United States Military supplies--United States Military supplies--International aspects Armaments--Industries Armaments--International aspects Armaments--Sales

PUBLIC AFFAIRS INFORMATION SERVICE BULLETIN

NUCLEAR WEAPONS:	Atomic weapons Neutron bomb United States--Military policy
NATO:	North Atlantic Treaty Organization Europe, Western--Defenses Atlantic Community See also various NATO countries under the term Defenses, e.g., Defenses--Great Britain
ARMS SALES:	Armaments--Export-import trade Armaments--Finance Armaments--Limitation United States--Military assistance program Military assistance Military market Defense contracts

READERS' GUIDE TO PERIODICAL LITERATURE

NUCLEAR WEAPONS:	Atomic weapons Atomic warfare United States--Defenses United States--Military policy Neutron bombs
NATO:	NATO Europe, Western--Defenses Europe, Western--Armed Forces See also the subdivision Armed Forces--Appropriations and expenditures under various NATO countries
ARMS SALES:	Military assistance, American Munitions--Export-import trade Military-industrial complex Airplane industry--Export-import trade Airplane industry--International aspects Airplane industry--United States Firearms industry

SOCIAL SCIENCES INDEX

NUCLEAR WEAPONS:	Atomic weapons United States--Military policy
NATO:	Military finance--Europe, Western North Atlantic Treaty Organization See also various NATO countries under the term Military finance, e.g., Military finance--Great Britain
ARMS SALES:	Munitions--United States Munitions--International aspects Military assistance, American Armaments--International aspects Military-industrial complex Defense contracts

LEGISLATIVE INFORMATION

Congressional activities on the debate issues may be monitored by searching the following printed publications. Search terms for these publications appear in Table 2.

> CONGRESSIONAL RECORD

The Congressional Record provides an edited transcript of the activities on the floor of the House and the Senate. It is published each day Congress is in session. Subject and name indexes are published biweekly and cumulated annually.

> CONGRESSIONAL QUARTERLY WEEKLY REPORT

Congressional Quarterly Weekly Report provides current information on congressional activities, the progress of major bills, and background information on major policy issues. Important recent articles are indexed on the back cover of each issue. Consult this index under the heading "Defense." A quarterly and an annual index are also issued. Congressional Quarterly also publishes an annual publication which cumulates material appearing in the weekly reports during that year. This publication is entitled the CQ Almanac.

> NATIONAL JOURNAL

National Journal provides information on important executive branch and congressional actions. The weekly reports tend to address fewer issues but in greater depth than Congressional Quarterly Weekly Report. Annual indexes for subjects, personal names, government organizations, and private organizations are available for National Journal. The back cover of each issue of the Journal also contains a brief index to recent articles. Consult this index under the heading "Defense."

BILLS AND RESOLUTIONS

PRINTED INDEXES

> CONGRESSIONAL INDEX

The Congressional Index, published by the Commerce Clearing House, is a weekly looseleaf service which provides content and status information for bills and resolutions pending in Congress. The progress of the bills and resolutions is reported from the introduction of the legislation to final disposition.

> MAJOR LEGISLATION OF THE CONGRESS (MLC)

The MLC provides summaries of selected major legislation arranged by subject. It includes background on the issues and information on the content and status of major bills affecting that issue. The MLC may be purchased from the Government Printing Office or consulted at a Government depository library.

> DIGEST OF PUBLIC GENERAL BILLS AND RESOLUTIONS

The Digest summarizes the essential features of public bills and resolutions and changes made in them during the legislative process. The Digest is compiled by the Congressional Research Service and published during each session of Congress in two cumulative issues and a final issue at the conclusion of the session. The Digest has sponsor/cosponsor, identical bills, short title, and subject indexes.

> CONGRESSIONAL RECORD

Bills and resolutions are often printed in the Congressional Record, along with explanatory materials, as they are introduced. A fuller explanation of this tool appears on the previous page.

CONGRESSIONAL PUBLICATIONS

Copies of recently issued hearings and committee prints should be requested directly from the issuing committee. Congressional hearings and committee prints may also be found in the collections of government depository libraries.

PRINTED INDEXES

> CIS INDEX (Index to the Publications of the United States Congress)

The CIS Index, produced by the Congressional Information Service, abstracts all congressional publications with the exception of the Congressional Record. It covers hearings, committee prints, House and Senate reports, documents, and public laws. The Index is published monthly and cumulated quarterly and annually. Each issue is divided into index and abstract portions. Appropriate search terms for this index are listed in Table 2.

> MONTHLY CATALOG OF UNITED STATES GOVERNMENT PUBLICATIONS

The Monthly Catalog lists documents issued by all branches of the Federal Government, including Congress. The Catalog indexes and abstracts congressional publications in less detail than the CIS Index. Appropriate search terms for the Catalog are listed in Table 4.

ONLINE BIBLIOGRAPHIC DATA BASES

> CIS INDEX

The CIS Index is available online in the Lockheed and SDC data base systems.

TABLE 2 - SEARCH TERMS FOR LEGISLATIVE INDEXES

CONGRESSIONAL RECORD

NUCLEAR WEAPONS:	Atomic energy
NATO:	North Atlantic Treaty Organization
ARMS SALES:	Military assistance Arms Export Control Act

CONGRESSIONAL QUARTERLY WEEKLY REPORT

NUCLEAR WEAPONS:	Weapons--Nuclear weapons Weapons--Neutron bomb National security
NATO:	North Atlantic Treaty Organization (NATO) See also various NATO countries
ARMS SALES:	Foreign affairs--Arms sales Department of Defense Foreign aid

NATIONAL JOURNAL

NUCLEAR WEAPONS:	Defense (Subject Index)
NATO:	North Atlantic Treaty Organization (Government Organizations Index)
ARMS SALES:	Defense (Subject Index) Foreign affairs (Subject Index)

CONGRESSIONAL INDEX

NUCLEAR WEAPONS:	Nuclear weapons
NATO:	North Atlantic Treaty Organization
ARMS SALES:	Government procurement--Defense production Government procurement--Weapons Foreign aid--Security assistance Foreign aid--Limitations Defense Department

MAJOR LEGISLATION OF THE CONGRESS

NUCLEAR WEAPONS:	Defense and national security
NATO:	Defense and national security
ARMS SALES:	Defense and national security
	Foreign policy and assistance programs

DIGEST OF PUBLIC GENERAL BILLS AND RESOLUTIONS

NUCLEAR WEAPONS:	Atomic energy and power--Nuclear exports
	Atomic energy and power--Nuclear fuels
	Armed forces and uniformed services--Defense articles
	Foreign relations and policy--International control of atomic power
NATO:	Treaties and international agreements--NATO countries
	Foreign relations and policy--NATO countries
ARMS SALES:	Foreign relations and policy--American military assistance
	Foreign relations and policy--Arms control
	Foreign trade and investments--Arms sales

CIS INDEX

NUCLEAR WEAPONS:	Nuclear weapons
NATO:	NATO
ARMS CONTROL:	Military assistance
	Arms Export Control Act
	Defense contracts and procurement
	Defense industries

NEWSPAPER ARTICLES

The following indexes may be used to locate newspaper articles on debate topic issues. The search terms to be used with the printed indexes are listed in Table 3.

PRINTED INDEXES

> NEW YORK TIMES INDEX

The *New York Times Index* provides extensive abstracts for articles appearing in the *New York Times*.

> BELL & HOWELL NEWSPAPER INDEXES

The *Bell & Howell Newspaper Indexes* list articles appearing in the *Chicago Tribune*, *Chicago Sun-Times*, *Denver Post*, *Detroit News*, *Houston Post*, *Los Angeles Times*, *New Orleans Times-Picayune*, *San Francisco Chronicle*, and *Washington Post*.

ONLINE BIBLIOGRAPHIC DATA BASES

> NEW YORK TIMES INFORMATION BANK

The *New York Times Information Bank* is a current affairs data base containing citations to 15 daily newspapers and 43 journals. Some public and research libraries have access to the *Info Bank*, as it is popularly called.

> NEXIS

The *NEXIS* library provides access to wire service articles from the Associated Press, United Press International, and Reuters, articles from the *Washington Post*, and the contents of six journals. The journals indexed include the *Congressional Quarterly Weekly Report* , *Newsweek*, and *U.S. News & World Report*. In addition to providing citations and abstracts of the materials included in the data base, *NEXIS* makes the full text of the articles available online.

TABLE 3 - SEARCH TERMS FOR NEWSPAPER INDEXES

BELL & HOWELL NEWSPAPER INDEXES

NUCLEAR WEAPONS:	Atomic weapons Missiles Military policy
NATO:	North Atlantic Treaty Organization See also various NATO countries
ARMS SALES:	Defense industry Military assistance to foreign countries Military weapons Military policy

NEW YORK TIMES INDEX

NUCLEAR WEAPONS:	Atomic energy and weapons--Atomic weapons Atomic energy and weapons--United States--Atomic weapons Missiles
NATO:	North Atlantic Treaty Organization (NATO) See also the subdivision Armament, Defense and Military Forces under various NATO countries, e.g. Europe--Europe, West--Armament, Defense and Military Forces
ARMS SALES:	Foreign aid--United States United States armament and defense--Defense contracts and production United States armament and defense

ORGANIZATIONS

The following organizations were selected from the Encyclopedia of Associations and the Washington Information Directory, 1981-1982 as possible sources of information on defense issues. The descriptions of the groups' activities are taken from these sources.

American Enterprise Institute for Public Policy Research
1150 17th St., N.W.
Washington, D.C. 20036
(202) 862-5800

Aims are "to assist policy makers, scholars, businessmen, the press, and the public by providing objective analyses of national and international issues." Serial publications: AEI Economist, AEI Foreign Policy and Defense Review, Regulation, Public Opinion.

Association of the United States Army
2425 Wilson Blvd.
Arlington, Va. 22201
(703) 841-4300

"To advance the security of the United States, and consolidate the efforts of all who support the United States Army as an indispensable instrument of national security."
Serial publications: Defense Reports, Army Magazine.

Center for Defense Information
Suite 300
600 Maryland Ave., S.W.
Washington, D.C. 20024
(202) 484-9490

"To make independent, informed analyses of U.S. defense policies available to journalists, scholars, government officials, and the general public." A project of the Fund for Peace.
Serial publication: Defense Monitor.

Center for Strategic and International Studies
Georgetown University
1800 K St., N.W.
Washington, D.C. 20006
(202) 887-0200

"Studies public policy issues that have international implications; publishes journals and issues reports."

Council on Foreign Relations
58 East 68th St.
New York, N.Y. 10021
(212) 734-0400

"To study the international aspects of American political, economic, and strategic problems."
Serial publication: Foreign Affairs

Foreign Policy Association
205 Lexington Ave.
New York, N.Y. 10016
(212) 481-8450

"Nonpartisan educational organization to stimulate interest in international relations, assist in development of greater understanding of foreign policy issues confronting the United States and encourage citizen expression of opinion on foreign policy."
Serial publications: Headline Series, Great Decisions

Institute for Defense and Disarmament Studies
251 Harvard St.
Brookline, Mass. 02146
Serial publication: Arms Control Reporter

U.S. Department of Defense
Public Information Branch
The Pentagon
Washington, D.C. 20301
(703) 697-5737

"Answers written and telephone inquiries from the public about Defense Department policies and programs."

U.S. Department of State
Public Information Service
2201 C St., N.W.
Washington, D.C. 20520
(202) 632-6575

"Responds to requests for publications, films, and general information about the organization and policies of the Department of State."

Researchers may also contact the National Referral Center to obtain descriptions of organizations qualified and willing to answer questions or provide information on science and social science topics.

National Referral Center
Library of Congress
Washington, D.C. 20540
(202) 287-5670

GOVERNMENT PUBLICATIONS

PRINTED INDEXES

For information on identifying pertinent congressional hearings, committee prints, reports and documents, see the Congressional Publications section of this research guide.

Search terms for these indexes are listed in Table 4.

> MONTHLY CATALOG OF UNITED STATES GOVERNMENT PUBLICATIONS

The Monthly Catalog lists documents issued by all branches of the Federal Government. It provides citations to reports, studies, fact sheets, maps, handbooks, conference proceedings, and congressional publications. The Catalog has monthly, semiannual, and annual indexes by author, title, subject, key words, and series/report title. The Monthly Catalog is also available online through the Lockheed Dialog system.

> WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS

The Weekly Compilation of Presidential Documents contains statements, messages, and other presidential materials released by the White House during the preceding week. The Weekly Compilation has weekly, quarterly, and annual indexes.

TABLE 4 - SEARCH TERMS FOR GOVERNMENT PUBLICATION INDEXES

MONTHY CATALOG OF UNITED STATES GOVERNMENT PUBLICATIONS

NUCLEAR WEAPONS:	Atomic weapons Atomic warfare
NATO:	North Atlantic Treaty Organization--Armed Forces North Atlantic Treaty Organization--United States See the subdivisions Defenses and Military policy under various NATO countries, e.g., Great Britain--Defenses
ARMS SALES:	Defense contracts--United States Military assistance, American United States--Military policy United States. Dept. of Defense.

WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS

NUCLEAR WEAPONS:	Nuclear weapons Nuclear war Arms and weapons systems Arms and weapons systems--Strategic weapons program
NATO:	North Atlantic Treaty Organization See also various NATO countries
ARMS SALES:	Defense and national security Arms and weapons systems Foreign assistance Foreign policy Defense, Department of

STATISTICAL SOURCES

The following indexes contain citations to statistical materials on defense spending. Search terms for these publications are listed below.

> AMERICAN STATISTICS INDEX (ASI)

The *American Statistics Index* indexes and describes the statistical publications of the U.S. Government, including periodicals, annual, biennial, semiannual, and special publications. The *Index* provides access to statistical materials by subject, name, issuing source, and title. The *Index* is published monthly and cumulated quarterly and annually.

> STATISTICAL REFERENCE INDEX

The *Statistical Reference Index* provides a guide and index to selected statistical reference material from non-Federal sources on a wide spectrum of subject matter. It includes the publications of trade, professional, and other nonprofit associations and institutes, business organizations, commercial publishers, university and independent research centers, and state government agencies. The *Index* provides access by subject, categories, name, issuing sources, and title. The *Index* is published monthly and cumulated quarterly and annually.

> PUBLIC AFFAIRS INFORMATION SERVICE BULLETIN (PAIS)

Many of the search terms included in the *PAIS Bulletin* list citations under the subdivision, "Statistics." A description of this tool appears in the Journal Articles section of this guide, and appropriate search terms are listed in Table 1.

AMERICAN STATISTICS INDEX AND STATISTICAL REFERENCE INDEX

NUCLEAR WEAPONS:	Nuclear weapons Missiles and rockets
NATO:	North Atlantic Treaty Organization
ARMS SALES:	Arms sales Military assistance Defense contracts and procurement Defense industries Department of Defense

UNITED STATES GOVERNMENT PRINTING OFFICE
SUPERINTENDENT OF DOCUMENTS
WASHINGTON, D.C. 20402

SUBJECT BIBLIOGRAPHY (SB)

SB-043
July 20, 1982

NOTICE

Prices shown will be honored through October 19, 1982 if orders are submitted on this order form. After that, prices are subject to change without notice, and you will be charged the price in effect at the time your order is processed.

PUBLICATIONS RELATING TO THE 1982-83 HIGH SCHOOL DEBATE TOPIC

___What Should Be the Levels of United States Commitments for National Defense? 1982.
S/N 052-071-00648-6 $ 8.50

**** *** **** *** **** *** **** *** **** ***

___Arms Control and Disarmament Agreements: Texts and Histories of Negotiations. *Contains the texts of the Geneva Protocol of 1925 and, in chronological order, all major arms control agreements in which the United States has been a participant since World War 2. Each agreement is accompanied by a brief background discussion prepared by the Arms Control and Disarmament Agency.* 1980. 247 p.
AC 1.2:Ar 5/3/980 S/N 002-000-00076-8 6.00

___Arms Transfer Policy, Report to Congress. *Discusses restraints on United States arms sales to foreign countries, and analyzes the effects of the restraints on our foreign policy, economy, and military posture.* 1977. 107 p. il.
Y 4.F 76/2:Ar 5/18 S/N 052-070-04175-7 4.75

___Commission on the Organization of the Government for the Conduct of Foreign Policy, Appendices, Volume 4. *Papers included deal solely with defense management and arms control issues. Gives information on making up the annual defense budget, acquiring weapons, conducting military operations, and limiting exports on grounds of national security.* 1975. 475 p. il.
Y 3.F 76/5:2 Or 3/975/v.4
S/N 022-000-00114-1 11.00

___Commitment in American Foreign Policy: A Theoretical Examination for the Post-Vietnam Era. 1980. 70 p. il.
D 5.409:80-4 S/N 008-020-00830-3 4.75

___Community of Interests: NATO and the Military Assistance Program, 1948-1951. *Examines the early years of NATO, the Mutual Defense Assistance Program, the Military Assistance Program, and the role of the Office of the Secretary of Defense in military assistance and in the conduct of foreign policy.* 1980. 251 p. il. Cloth.
D 1.2:C 76/6/948-51 S/N 008-040-00084-2 12.00

___Continuity and Change in the Eighties and Beyond: Proceedings of the National Security Affairs Conference, July 23-25, 1979. *Contents of publication: Arms control and defense planning; Politics and the limited contingency force; Mobilization and surge potential; East Asia; Western hemisphere.* 1979. 222 p.
D 5.412:979 S/N 008-020-00819-2 $ 6.50

___Decade of Confrontation? The 1980's: Proceedings of the Eighth Annual National Security Affairs Conference, July 13-15, 1981. *Contents of publication: The U.S. and the USSR: Is confrontation inevitable?; The Middle East and Southwest Asia: What strategies for the U.S.?; Central America and the Caribbean: Cockpit of big power conflict?; NATO and the Warsaw Pact: Can internal differences be managed?; Global terrorism: What should the U.S. do?* 1982. 334 p.
S/N 008-020-00899-1 9.50

___Documents on Disarmament, 1978. 1980. 852 p. il.
AC 1.11/2:978 S/N 002-000-00075-0 10.00

___First Use of Nuclear Weapons, Preserving Responsible Control. Hearings, 94th Congress, 2d Session, March 16, 18, 23, and 25, 1976. 1976. 246 p.
Y 4.In 8/16:N 88/3 S/N 052-070-03402-5 6.00

___Fiscal Year 1983 Arms Control Impact Statements. 1982.
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